Ranger Rick's nature magazine

July 1976

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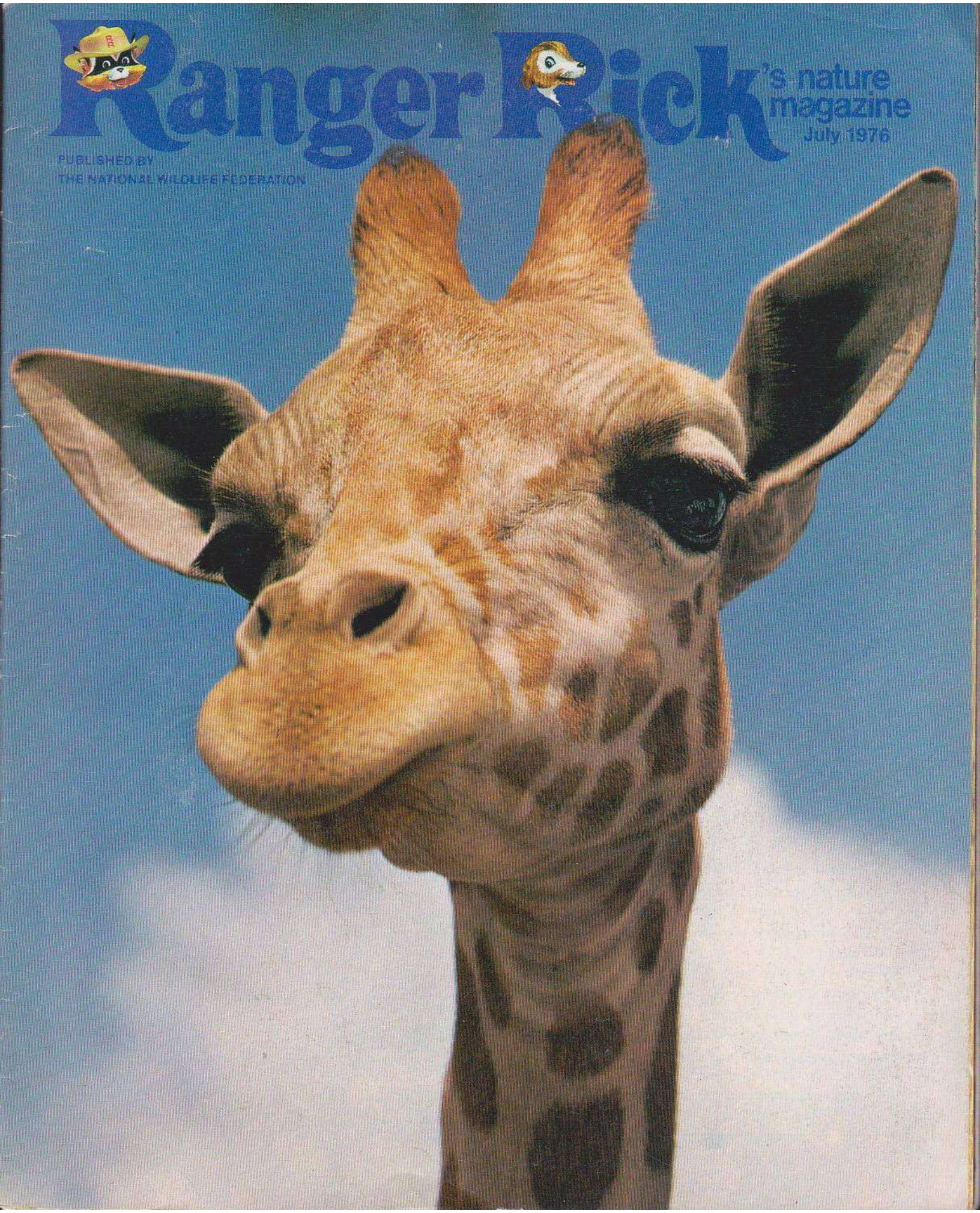
THE NATIONAL WILDLIFE FEDERATION



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Cover credits:
Front—Masai Giraffe by Dr. M. P. Kahl/ Bruce Coleman Inc.
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I give my pledge as a member of Ranger Rick's Nature Club

To use my eyes to see the beauty of all outdoors.

To train my mind to learn the importance of nature.

To use my hands to help protect our soil, water, woods and wildlife.

And, by my good example, to show others how to respect, properly use and enjoy our natural resources.

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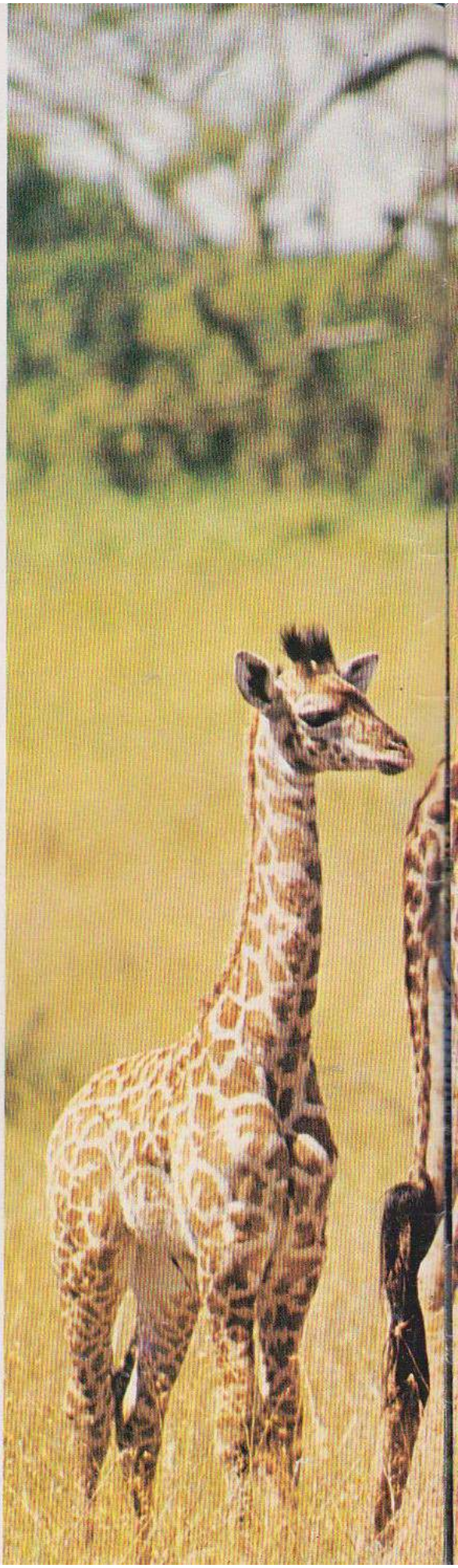

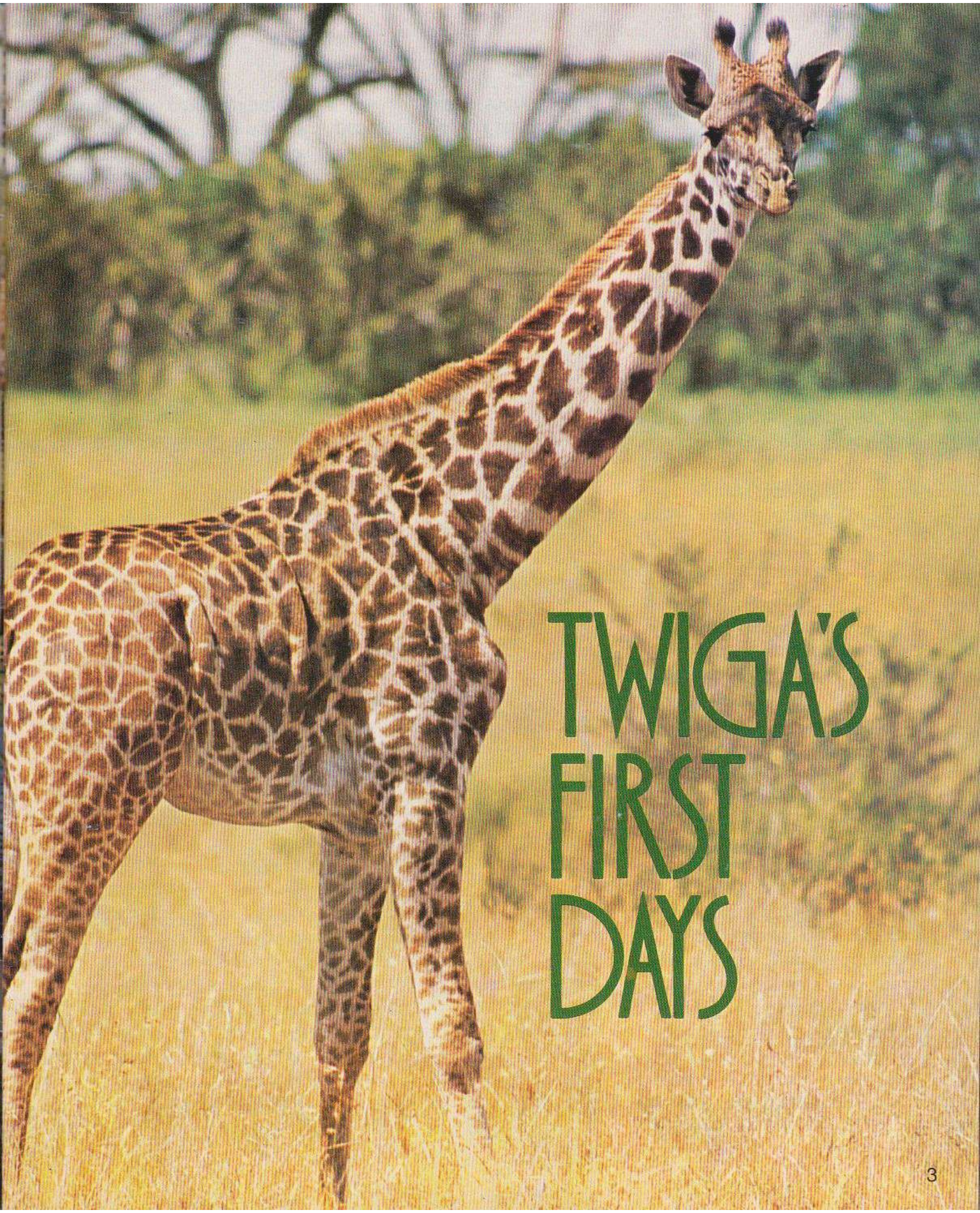
TWIGA'S
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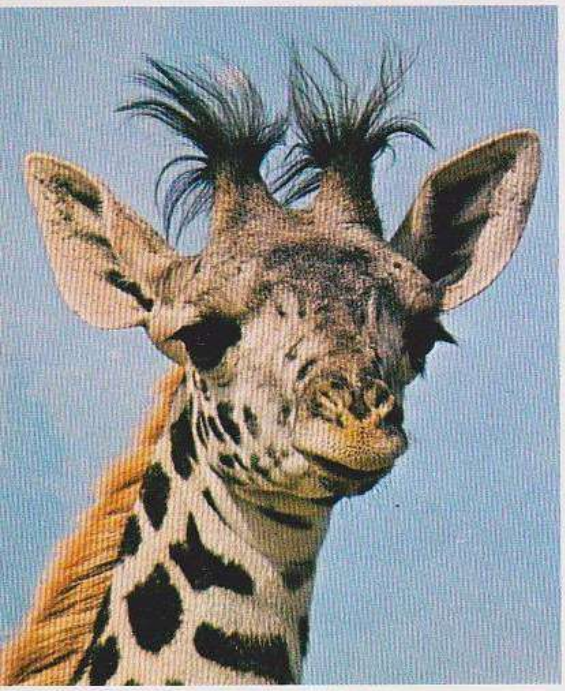
DAYS



Two fuzzy tassels on baby Twiga's head will soon grow and change to hard, knobby horns.

by Dorcas MacClintock

The sun soars over the wide Serengeti landscape in East Africa. It casts shadows among thickets and along stream beds. Here and there its harsh rays are softened by feathery leaves of flat-topped acacia trees. On this summer day, in the middle of the dry season, a giraffe calf is born.

Twiga drops into the world, tumbling two meters (about six feet) from her mother's birth canal to land on the ground. Feebly she raises her head. Two tassels of hair, crumpled on top of her head, indicate small knobby horns soon to become bone-hard. Brown leafy splotches cover her buff-colored hide. These jagged markings are typical of the Masai giraffe. The cow turns to lick Twiga's nose, eyes and damp, floppy ears.

Minutes after birth Twiga struggles to get up. Again and again her wobbly legs buckle. Gentle nuzzles from her mother encourage her. At last she is up! But not for long. The cow's 46-centimeter (18-inch) gray tongue wraps around Twiga's head and topples the unsteady calf. A half hour after birth Twiga controls her legs well enough to stay up. She is nearly 1.8 meters tall, but how small she looks pressing against her mother, who is 5 meters tall.

Twiga is hungry. Finding her mother's rough-skinned "knee" a likely spot, she tries to nurse. The cow shifts position. Twiga finds one of the swollen milk bag's four teats. Eagerly and for many minutes she suckles. This first milk is protection against infection as well as a rich source of nourishment.

Twiga's mother gazes across the waving grass and scattered trees. She is on the lookout for hyenas or other predators that might be attracted by the birth of her baby. Because of her height and sharp eyesight, she can see on all sides and for long distances. Zebras and other hoofed mammals grazing near giraffes rely on the tall sentinels to spot danger.

Giraffes can see each other at great distances—800 meters (half a mile) or more. They can keep in touch with each other even when their herd is scattered. Only when the giraffes are close together can one be sure it *is* a herd. The size of the herd changes as giraffes come and go.

During the hours after her birth Twiga's every move is followed by her mother. Wherever she totters, her mother is close behind. By the third day they change places. Little Twiga now tags along behind.

Twiga and her mother join a herd of two other cows and their calves. Moving slowly through thick bushes of whistling thorn, the giraffes browse. Long, pointed muzzles thrust among sharp spikes. Bristly lips and prehensile (pre-HEN-sil) tongues snatch at leafy, thorny branches. Thick, gummy saliva protects against pricks and helps the animals to swallow.

At midday the distant horizon dances with heat mirages. Most animals have sought shade in tangles of undergrowth. Giraffes, whose hides are 2.5 centimeters (one inch) thick, are not

bothered by the sun and they can go for days, maybe even weeks, without water. But sooner or later thirst overcomes their wariness of water holes.

As Twiga's herd approaches a stream the cows are nervous. Eyes stare, ears flick, nostrils quiver. They walk forward, then halt again. Oxpeckers, or tick birds, searching for ticks and other parasites rise, flutter and resettle on the giraffes' backs and necks.

On the streambank Twiga watches her mother spread her forelegs and lower her head to drink. The cow pauses, head raised, lips dripping water, then plunges her muzzle into the water again.

Across the stream a shadow shifts. Head up and alert, one giraffe spots a lion lying in the thicket. It snorts an alarm! Startled, Twiga's mother snaps back her head, pulls her forelegs under her body and wheels about.

Reddish brown manes ripple and black fly-whisk tails swish in wild, slow circles as the giraffes gallop away. Twiga's mother covers three meters (10 feet) with each stride. Twiga gallops close beside her mother.

The herd slows and stops. Twiga's mother and the other two cows turn to stare in the direction of the water hole. Twiga's sides heave from fright and exertion. No lion is in sight. The herd turns and ambles across the plains.

The giraffe's walk is called pacing. Left fore and hind legs move forward together, then right fore and hind legs. With each half stride of a pair of legs the neck swings forward and back. The animals look as if they are moving in slow motion, but pacing allows for longer strides than the diagonal

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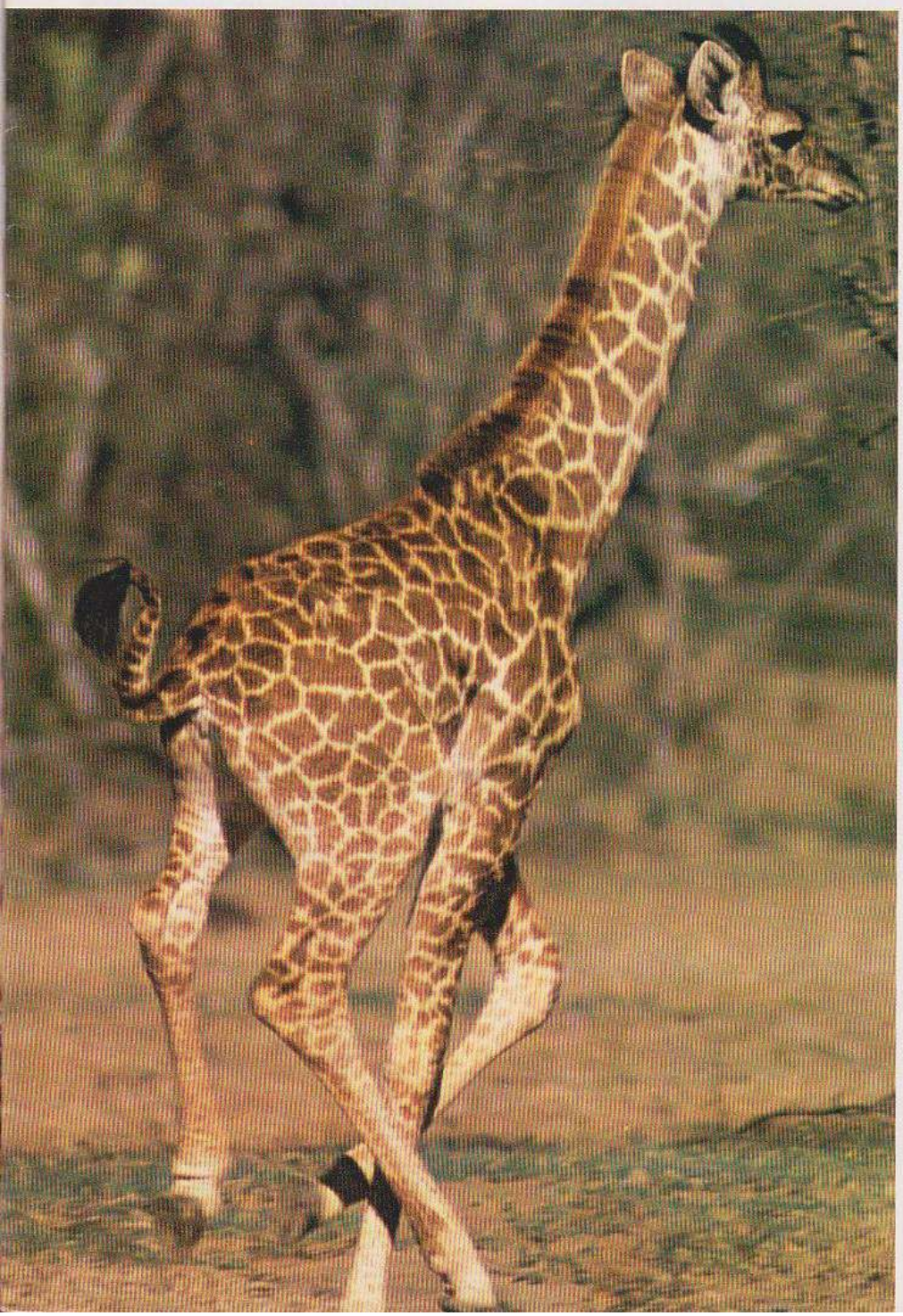


Twiga escapes from the lion and runs to find her mother.

walk of most four-footed mammals, and it is faster.

In spite of its long legs and towering height the giraffe is one of the most graceful mammals. Its name comes from an Arabic word *zarafah* (zah-RAH-fa) which means "creature of grace."

A stand of yellow-barked fever trees offers good browsing. Twiga samples a few leaves from a branch her mother pulls down. Then, independent as any young giraffe, she wanders off. Curiosity leads her farther and farther from her mother and the rest of the herd.

Something is moving in the tall brown grass. Suddenly something rushes her! It's a lioness!

Twiga panics. As she spins about, a sharp claw rakes her flank. As fast as she can gallop she heads for the herd. Once with them, she backs under her mother's belly for protection. Blood trickles from the small scratch made by the forepaw of the attacker. The lioness trots off. She knows better than to risk the powerful kicks of the cow's forelegs.

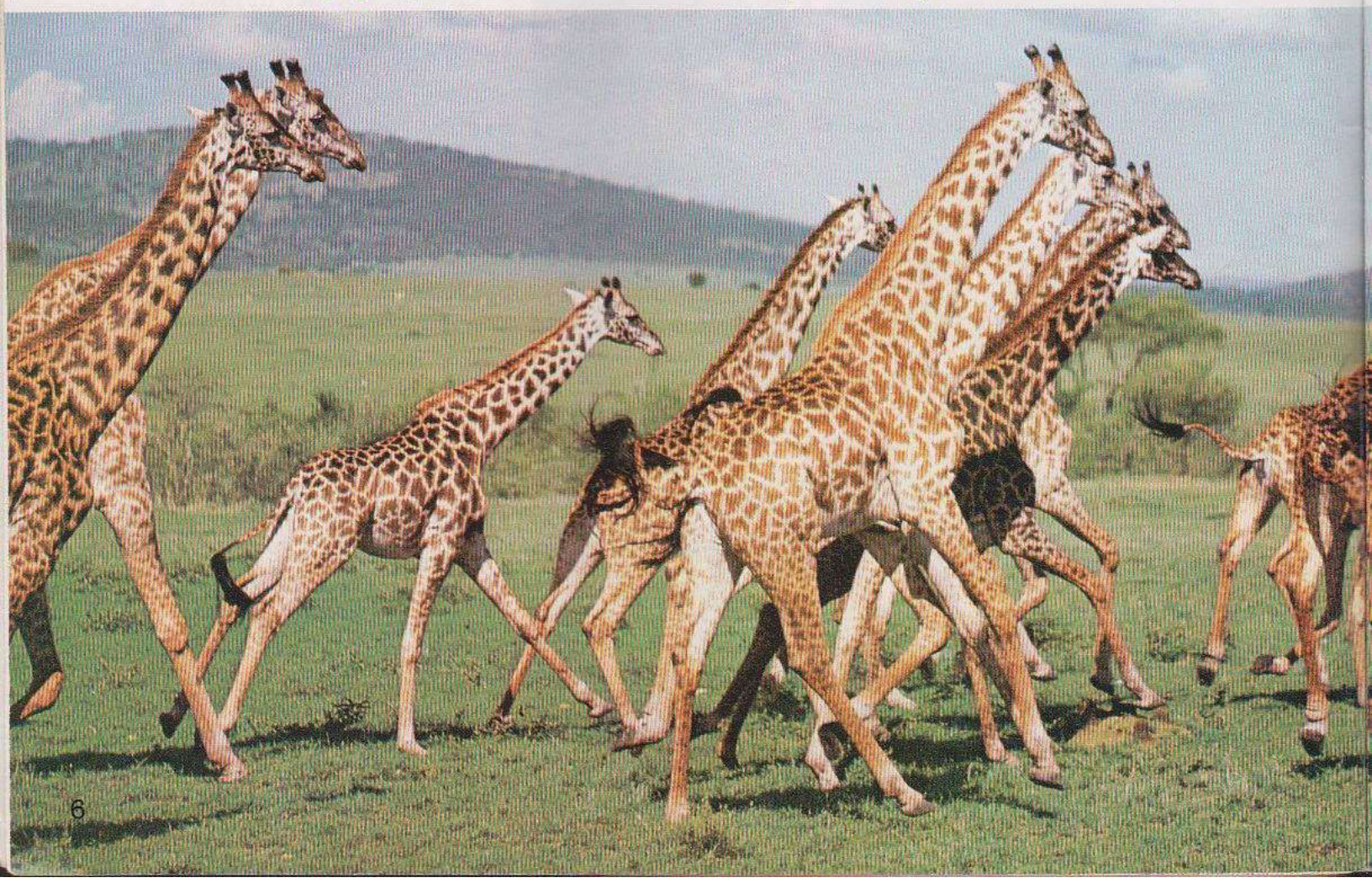
This time Twiga has been lucky. From now on she will beware of a twitching tail that marks the position of a hidden lioness.

Twiga follows her mother to a salt lick. The ground is bare and well trampled by hoofed animals. The giraffes bend or spread their forelegs to lick and bite at the soil.

Nearby two bull giraffes rub their long, flexible necks together. Then they begin to shove, heads and necks swinging out to deliver sledge-hammer blows. Suddenly one of the sparring bulls walks away, admitting defeat.

The big giraffes begin to feel drowsy. Heads droop,

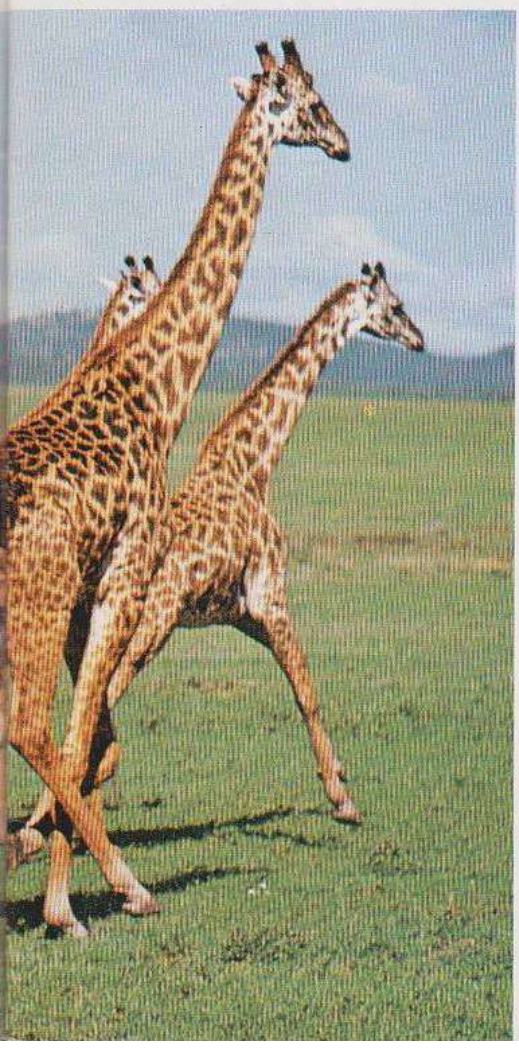
Twiga gallops with her herd over the African plain. Taking three-meter strides, giraffes can run

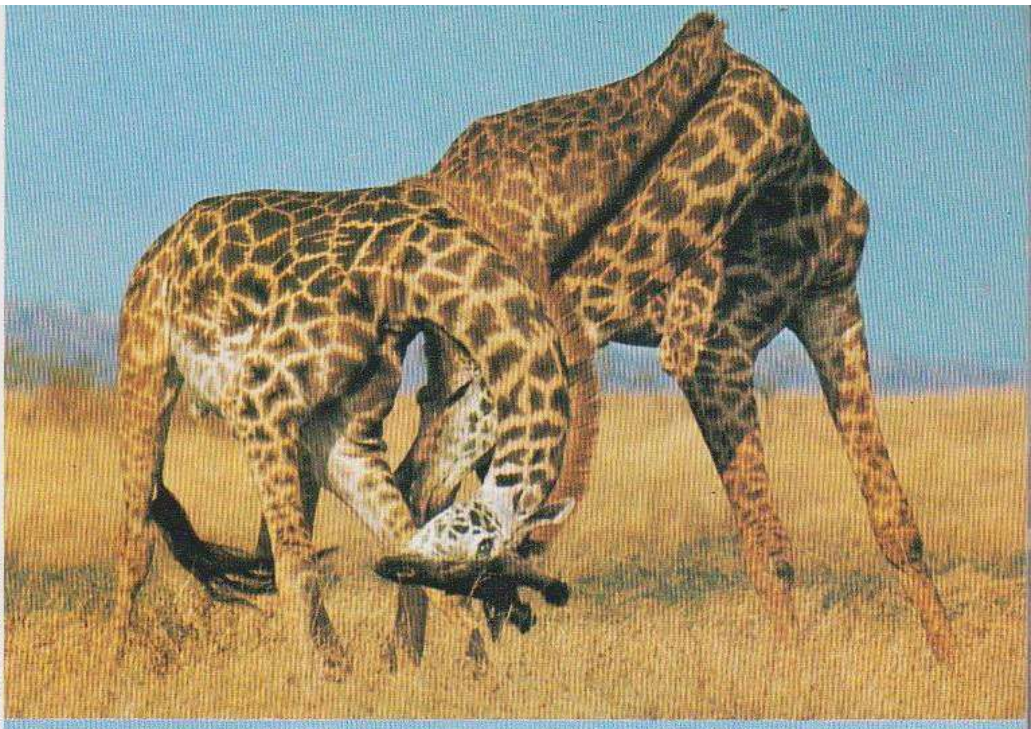


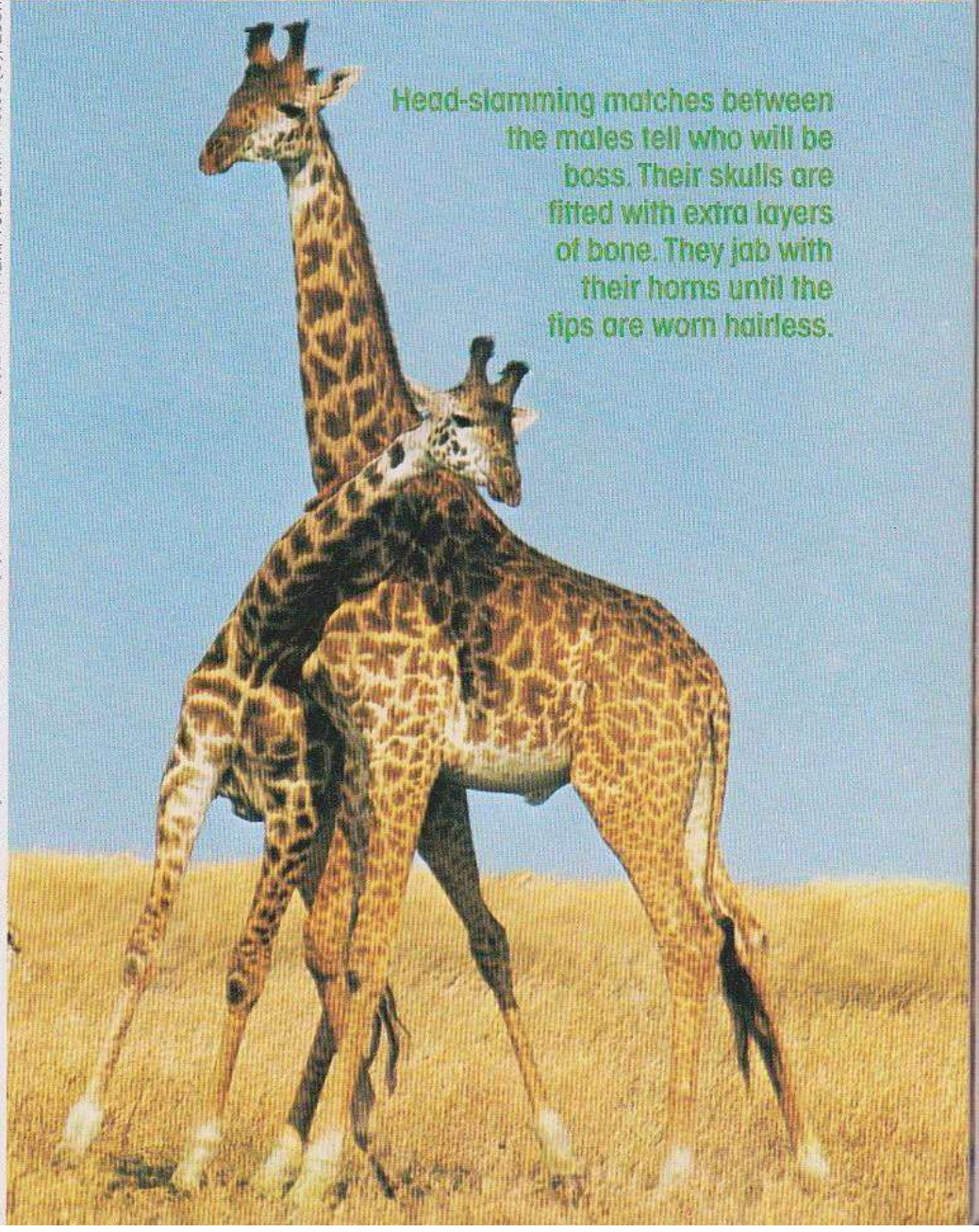
necks sag. Lazily they shift their forelegs, chew their cuds and switch their tails. Twiga drops to her knees and flops her small body to the ground. She lies with forelegs tucked neatly beneath her. Then, safe in the midst of the herd, she turns and lowers her head to rest. Tired from her adventures, Twiga sleeps. *The End*

Rangers: In Swahili, the common language of Tanzania and the other East African countries (Kenya, Uganda, Rwanda and Burundi), *twiga* means giraffe. All giraffes have the same scientific name, *Giraffa camelopardalis,* but there are nine types of giraffe, each with a special spot pattern. *R.R.*

at speeds of 50 kilometers an hour.



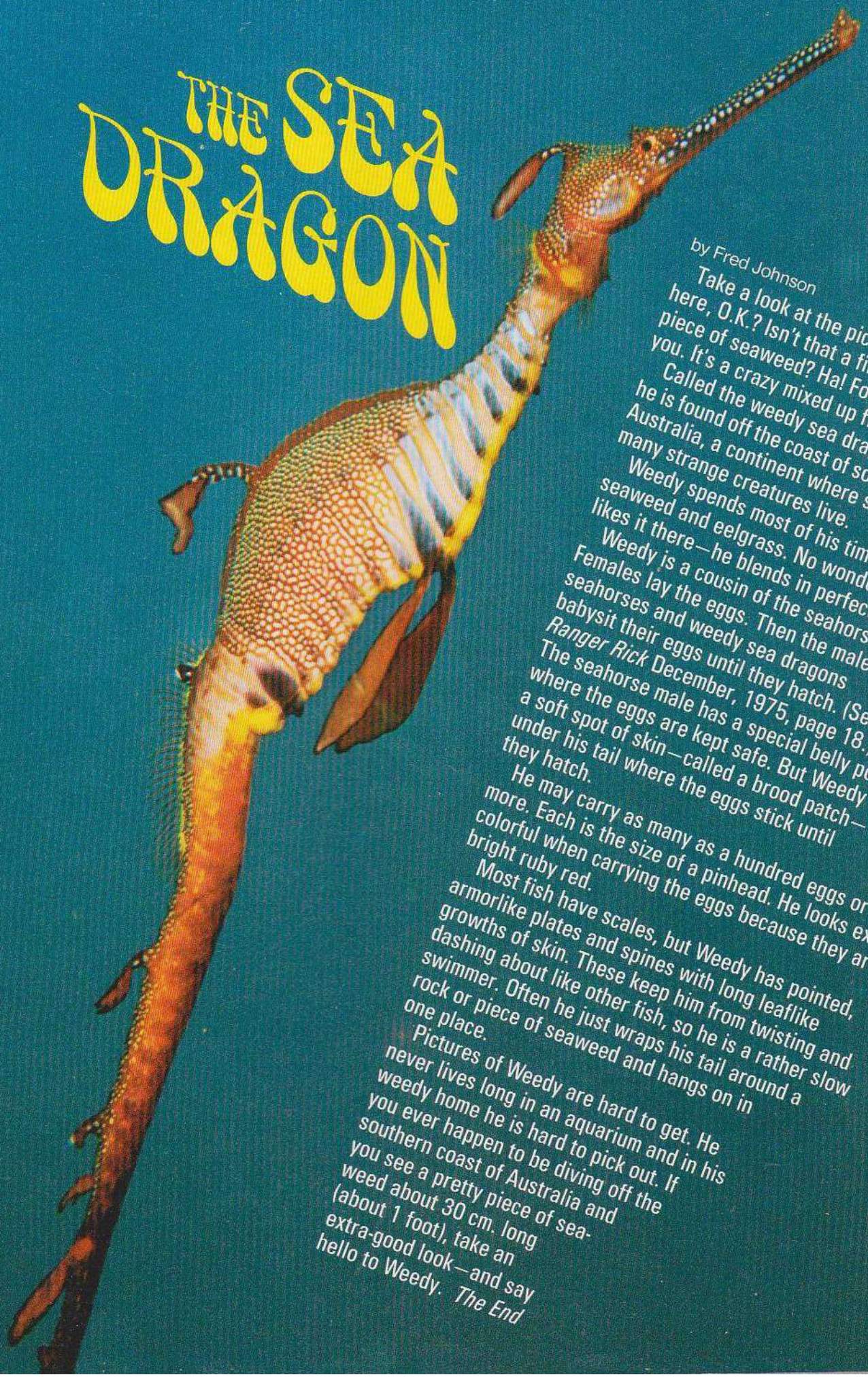




Head-slamming matches between the males tell who will be boss. Their skulls are fitted with extra layers of bone. They jab with their horns until the tips are worn hairless.

Photos by Erwin A. Bauer (3); Norman Myers/Bruce Coleman Inc. (4); Verda Crenshaw (5); Dr. M. P. Kahl/Verda Intl. Photos (6); Leonard Lee Rue III (7)

THE SEA DRAGON



by Fred Johnson

Take a look at the picture here, O.K.? Isn't that a fine piece of seaweed? Ha! Fooled you. It's a crazy mixed up fish!

Called the weedy sea dragon, he is found off the coast of southern Australia, a continent where so many strange creatures live.

Weedy spends most of his time in seaweed and eelgrass. No wonder he likes it there—he blends in perfectly.

Weedy is a cousin of the seahorse. Females lay the eggs. Then the male seahorses and weedy sea dragons babysit their eggs until they hatch. (See *Ranger Rick* December, 1975, page 18.)

The seahorse male has a special belly pouch where the eggs are kept safe. But Weedy has a soft spot of skin—called a brood patch—under his tail where the eggs stick until they hatch.

He may carry as many as a hundred eggs or more. Each is the size of a pinhead. He looks extra colorful when carrying the eggs because they are bright ruby red.

Most fish have scales, but Weedy has pointed, armorlike plates and spines with long leaflike growths of skin. These keep him from twisting and dashing about like other fish, so he is a rather slow swimmer. Often he just wraps his tail around a rock or piece of seaweed and hangs on in one place.

Pictures of Weedy are hard to get. He never lives long in an aquarium and in his weedy home he is hard to pick out. If you ever happen to be diving off the southern coast of Australia and you see a pretty piece of seaweed about 30 cm. long (about 1 foot), take an extra-good look—and say hello to Weedy. *The End*

Photo by Neville Coleman/Tom Stack & Assoc.

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Careful Campers

by Ted Pankowski

Imagine lying on the ground wrapped up in your sleeping bag. High above in the clear night you see thousands of stars. There are sounds all around you: the rustle of leaves and the groaning of trees, the calls of frogs and insects, and your own breathing.

You think: *Camping is great. I feel part of nature in a way I never could at home.* Then you snuggle down into a warm and satisfying sleep.

People have always camped. American Indians knew where to find drinking water and how to protect their bodies from the sun, wind, rain and cold on long trips. They could "read" the forest for signs that animals were nearby, or that the weather was about to change.

Today millions of people go camping to discover the excitement of living outdoors; to enjoy the adventure of doing things for themselves and having fun with others; and best of all, to breathe fresh, clean air.

Most of us don't need to know how to live off the land. But camping skills and manners are important. All campers should know how to take good care of themselves and nature.

For hiking, backpacking, bike-packing and canoe camping, the first rule is: *travel light.* Carry only what you'll need. A lightweight sleeping bag, sleeping pad and cooking gear are all important. So is lightweight food—dried meats and vegetables—instant soups, powdered milk, and fruits in plastic bags.

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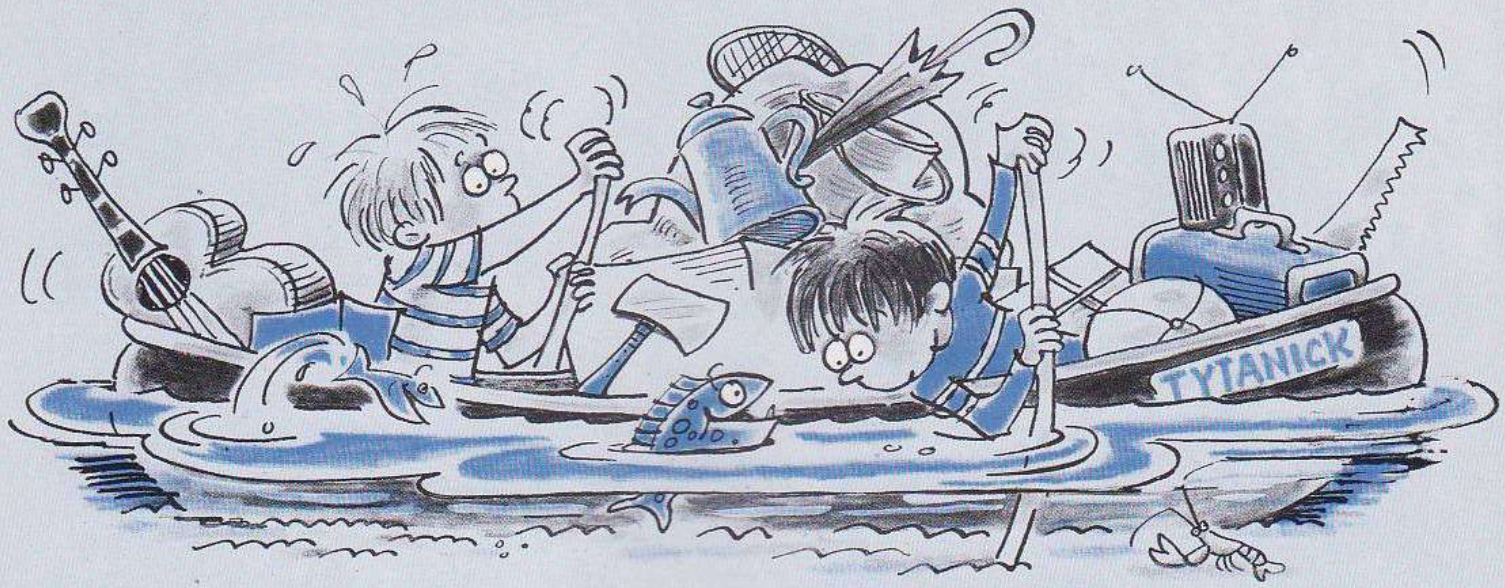


An overloaded canoe can easily swamp and sink.

"Woods-wise" campers never store food in sleeping bags or tents. Hungry raccoons, porcupines and bears may be attracted by the smell of the food. These are all fascinating animals to see, but inviting them to supper can be dangerous. Food should be wrapped tightly in plastic and hung in sacks from a tree limb some distance from camp.

Cooking outside takes extra time and skill. It means using a small gas stove (or starting from scratch with a fire). It means conserving water, cleaning up all traces of food and being extra careful with all fire.

Where it rains often you will need shelter —a tent, or maybe just a large piece of plastic called a tarp. Light tents are easy to carry and easy to set up, but practice in your backyard first. Screened tents keep out unwanted insects, particularly mosquitoes, which seem to be especially hungry around sunset. A good tent has good ventilation for warm weather, but stays cozy when it is cold and wet.

Your campsite should be in a place where flash floods are unlikely. Watch out for old, wobbly trees. If you pitch a tent in a gully, you're likely to end up soggy or stuck in the mud.

Good camping means good manners. Some people treat their campsites and equipment like toys. They are careless with knives and hatchets; they chop at trees and they chase animals. They are often careless with matches. They're noisy too. They litter and leave a mess. Such campers have no respect for their environment, their fellow campers or themselves.

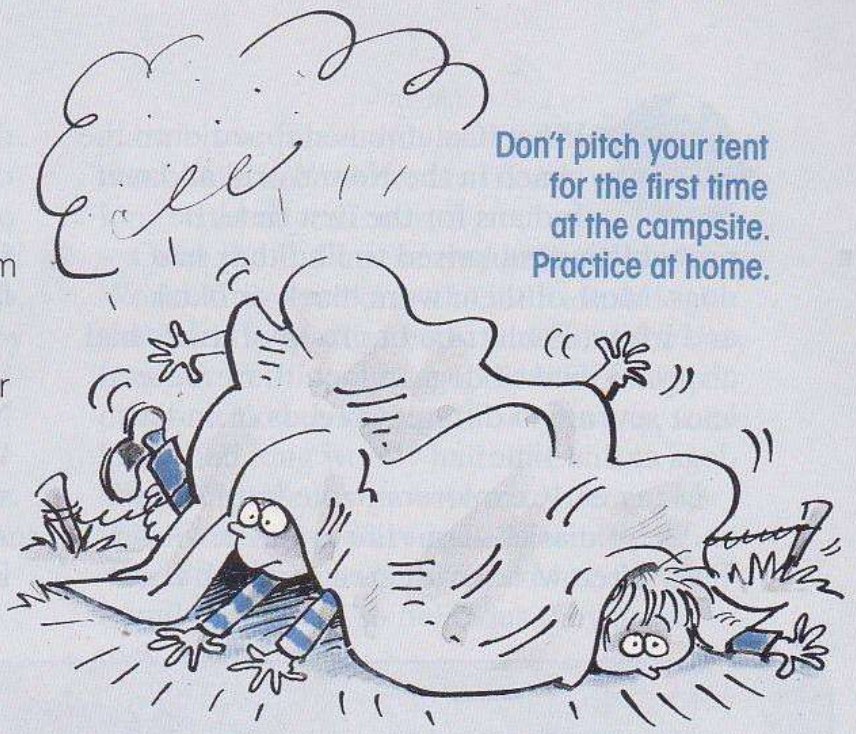
To be a friend of nature, learn these rules and remind others of them:

The smell of food in a tent can attract unwanted visitors!

Drawings by Ruth Van Soiver

1. Do not disturb trees, flowers, animals or rocks.
2. Be as clean as a cat. Go to the bathroom away from camp and away from water. Scoop a hole and cover it with dirt afterward.
3. Talk quietly so you don't wake up other campers.
4. Scoop out soil and make your campfire in the hole. Drown your campfire until cool to the touch. Then drown it some more and cover the ashes with the soil you scooped out.
5. Take *all* your trash out with you.
6. Leave your campsite looking *better* than you found it.

Preventing problems is part of being woods-wise. It's knowing how to start a fire so the wind won't snuff it out or make it burn too fast, or won't start a forest fire. It's knowing how to cut wood shavings without slashing your hand and how to stay on the trail by looking for landmarks such as unusual trees and rock formations. Good campers also know when to turn back.



Don't pitch your tent for the first time at the campsite. Practice at home.

When hiking, watch out for ankle-twister holes and eye-poker twigs. Stay away from cliffs, steep trails and loose gravel. Never trust a rock or a branch. Test it carefully first. If your feet get hot or "burn," change into a fresh pair of socks. Put adhesive tape over reddened areas. Otherwise you may get painful blisters. Be prepared for a change in weather. Always carry an extra sweater and a rain parka. In unfamiliar territory carry high-energy emergency food, like chocolate and nuts; matches in a waterproof case; a space blanket and a whistle.

No matter how careful you are, no matter how well you plan your trip, no matter how woods-wise you are, things can still go wrong. The unexpected will always be part of the adventure of camping. And you have to be ready.

You can camp by a lake, at the seashore, in the desert, in a state or national park or forest. Wherever you go, you will meet more and more people who love the outdoors and want to use the same camping areas. So it's important that all of us learn to take care of nature as well as ourselves. Have fun, but always remember that when camping, you are nature's guest. *The End*

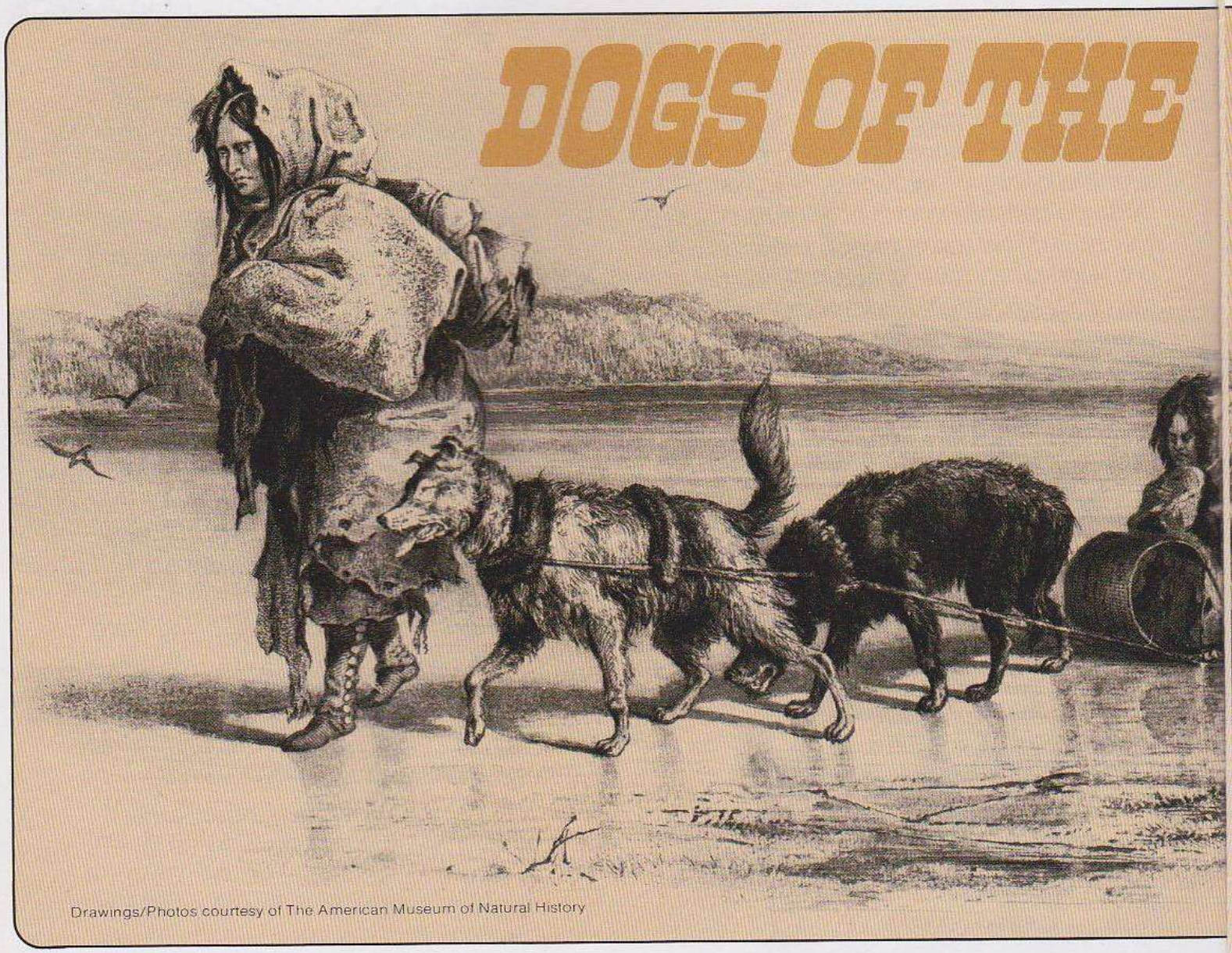
DOGS OF THE

by L. David Mech

When Columbus stepped onto the beach in the New World and met Indians for the first time, he probably was surprised to find they had dogs. Most of them were black or black and white. Each tribe or group of tribes had a special kind of dog. In fact, there were at least seventeen different breeds of Indian dogs at that time!

Many early explorers wrote long letters and kept diaries about life in the new land. They often wrote with great wonder about the unusual ways dogs were used here. Not only were they pets, hunting companions and watchdogs, but they were also used for carrying loads and sometimes even for food!

Where did these animals come from? At first people thought the Indians had tamed North American coyotes, just as ancient Old World people had tamed wolves. But then scientists looked at the dogs' skulls. Amazingly, they looked like the skulls of European and Asian dogs and wolves, not



Drawings/Photos courtesy of The American Museum of Natural History

like the skulls of coyotes. So the scientists decided the Indian dogs must have come from the Old World.

How did the Indian dogs get to America? Certainly not by swimming any oceans! No, they arrived here thousands of years ago by crossing a bridge. It was a natural bridge not made by humans—an ice and land bridge stretching from Asia to Alaska. It existed when our climate was much colder. The dogs had come along with early humans as they followed herds of mammoths and giant bison. The hardy and faithful dogs must have been welcome friends on that long, cold migration.

Once the Indians settled in the New World, they bred only the individual dogs that had the kind of body and behavior they wanted. In this way the Indians developed different breeds of dogs. For example, some kinds had long woolly hair, like sheep. Cloth and even wigs were made from the hair. Other dogs were raised for meat. When the Spaniards invaded Mexico, they found these dogs so delicious they ate all they could find!

The Spaniards were also surprised to see that Indian dogs were used for carrying loads. It had never occurred to them to use dogs in this way. Instead, they used horses which they brought with them.

A travois (tra-VOY) was made of two poles in a V shape. Deer or bison hide was stretched between the poles to form a seat. The narrow part of the V was harnessed to the back of a large dog. The wide part dragged on the ground.

It may not sound as fancy as a wagon, but the travois was simple to make and worked well. It could slide easily over uneven ground and go many places a wheeled cart would not have been able to go. It did very little damage to plants. When it snowed, a travois slid along like a sled.

Even when Indians began using horses they still liked to use dogs on crusted snow. The horses' hooves would break through the snow at every step. But dogs with their travois skimmed over the top without sinking in. Indians on the move often used both horses and dogs. Their few horses pulled large travois. Children and household goods were packed on dog travois and bumped along behind!

The large dogs of the Plains Indians were

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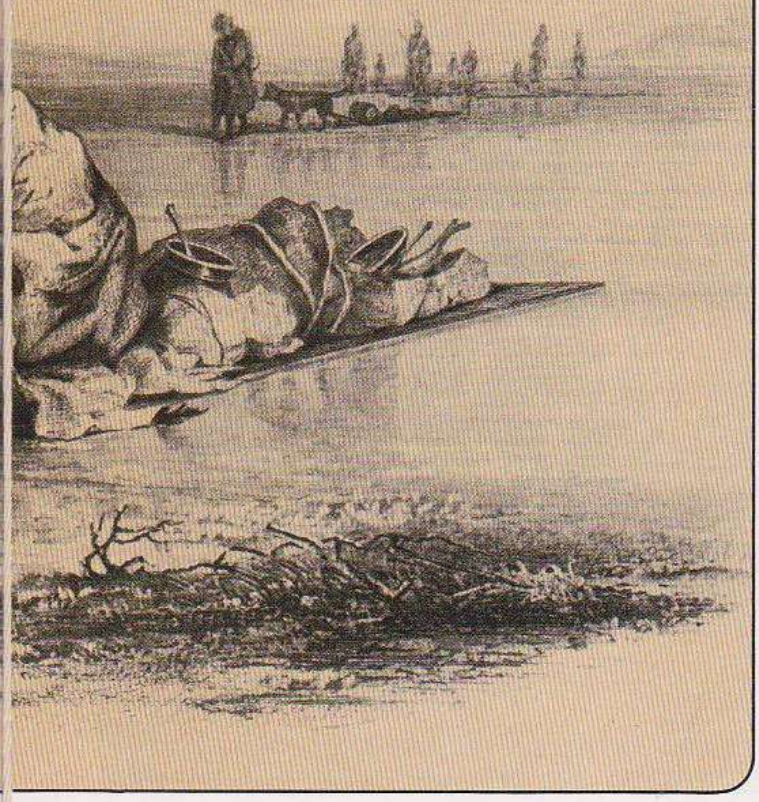
INDIANS

Survival for the American Indians and their dogs often meant working together.

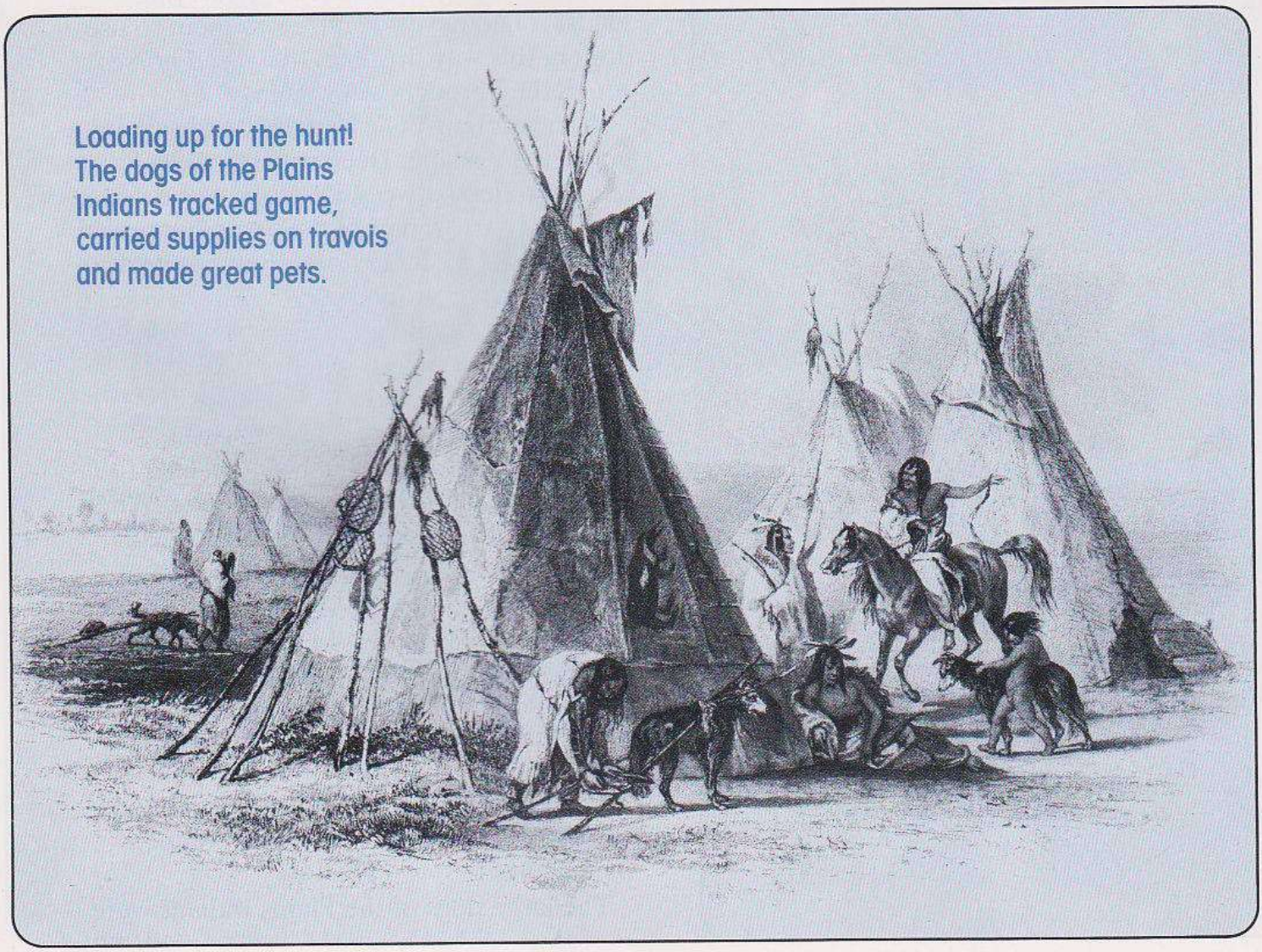


tawny, black or gray. They had big upstanding ears and a slightly curving tail. They were bred for pulling travois all over the great plains, from Canada to Mexico.

Big dogs pulled loads of firewood for the Indians living on islands off British Columbia. They were well trained and brave. Often they were given warrior names and went into battle with their masters. If they were killed, the Indians gave them a special burial. In many places in North America special burial mounds have been found where favorite dogs were buried.

In one such mound near an Indian village in Arizona, a dog was found buried with its master. Because of the dry desert air, the dog's body, though several hundred years old, was almost perfectly preserved. This long-haired, golden-brown Pueblo dog was medium-sized. It had a narrow nose, erect ears and a bushy tail.

The Aztec Indians of Mexico raised a dog we now call the "Mexican Hairless." This is one of the oldest dog breeds on earth. They are descendants of the hairless dogs of China. They have almost no hair, except on the tips of their tails and sometimes on top of their heads! The Aztecs



Loading up for the hunt! The dogs of the Plains Indians tracked game, carried supplies on travois and made great pets.

The Mexican Indians made pottery figures of their dogs (also below). They also sacrificed dogs to their gods and fattened them to eat!

believed the dogs had healing powers and they were very careful to wrap the dogs in warm clothes at night.

In the area that later became New York State, Iroquois Indians made sacred peace pipes in the shape of dog heads. Many Indian legends mention dogs which had many uses in religious ceremonies.

As you know, dogs love to hunt animals, and Indian dogs were no exception. The Plains Indian dogs were valuable for hunting deer, as well as for pulling travois. Recently dog bones were found in a cave in Utah. It had been used as a hunting camp—10,000 years ago!

Some of the smaller dogs of the Eastern Woodland Indians were kept as pets and were probably like terriers. They were good hunters. Stories are told about how they hunted beavers. The dog would bark and dig into the lodge, and when a beaver tried to escape, an Indian child would be waiting with a club.

But the biggest, most dangerous animals that Indians and their dogs hunted were bison. These big animals might weigh as much as a ton and they always traveled in large herds for protection.

The Indians formed hunting parties made up of men and dogs. Then they would try to find a lone bison and get as close as possible without scaring it. At the last moment the dogs rushed the bison and surrounded it. They kept barking and rushing at it to keep its attention.

Meanwhile the hunter would try to spear the animal just behind the shoulder without being trampled. This was very difficult, but the dogs were really helpful in keeping the buffalo's attention away from the Indian.

As more and more Europeans arrived to settle in America, they brought their own kinds of dogs with them. Many of the Indian dogs bred with the other dogs and established new, mixed breeds. Soon nearly all the Indian breeds of dogs were gone.

Today we have good clues to what these original Indian dogs were like from the written descriptions of explorers and others, and from the remains of dogs found buried in ancient Indian camps and villages. We also have pictures and sculptures that the Indians made of their pets. With all these clues we have been able to piece together the story of the trusty companions of the very first Americans. *The End*

GARBAGE EATERS

by Leon David Grebow

We recycle everything in my house. I'm the person in charge of recycling. After supper I put the wastes into the proper bag—and this can get pretty messy. That's when I call on my dog, a black poodle named Joshua Marmaduke, to help. He cleans off the tops of the containers and the insides of the cans before we recycle them.

Yesterday we ate lasagna for supper. There was some thick cheese left inside the plastic carton.

"This is a job for Joshua," I said to my mother, and I called my dog into the kitchen. "Here, Joshua, recycle this!"

Joshua Marmaduke was more than glad to help. He eagerly licked the gooey white cheese from the container.

Then I imagined, What if he began to eat the plastic too . . .? What if my dog had suddenly changed into a Plastic Chow Chomper?

As I stood there this daydream grew: What if animals really could recycle the stuff that people throw away!

I had read in my earth science class that in the forest there are living things that digest whatever falls to the forest floor. Some are very small, such as bacteria. Other creatures, such as earthworms, also help. If there are recyclers in the forest, why not have them in the home?

Suddenly I could see it all . . . headlines in the newspaper: WASTE BECOMES FOOD FOR NEW GARBAGE EATERS.

On the front page would be the Great Glass Grinderoceros. Its mouth is filled with rollers crushing and grinding glass. Its eyes look like safety goggles. Its body is like a rhinoceros—only much smaller. The most interesting feature of the Great Glass Grinderoceros is its skin. I could see right through it and watch the glass being crushed!

Next to the Great Glass Grinderoceros was a Sawtooth Plasticus. It is a small creature with a head like a pelican and a purple body like a miniature elephant. It has several rows of sharp teeth for mincing and munching even the toughest plastic!

Then I spotted a truly amazing recycler—the Crimson Can Crusher. This creature looks like a shiny red alligator with a mouth full of flat teeth. The kitchen floor won't be scratched when the Crusher slides over to the sink, because its belly is all covered with fur. Its mouth is hinged like a cabinet door, and its tail is a lever. Lift the lever, and the mouth opens wide. Push it down, and the mouth slams shut to crush even the strongest metal can.

In the last picture was a Woody Pulper standing proudly beside a Paper Mush Mouth. These two creatures are in the same

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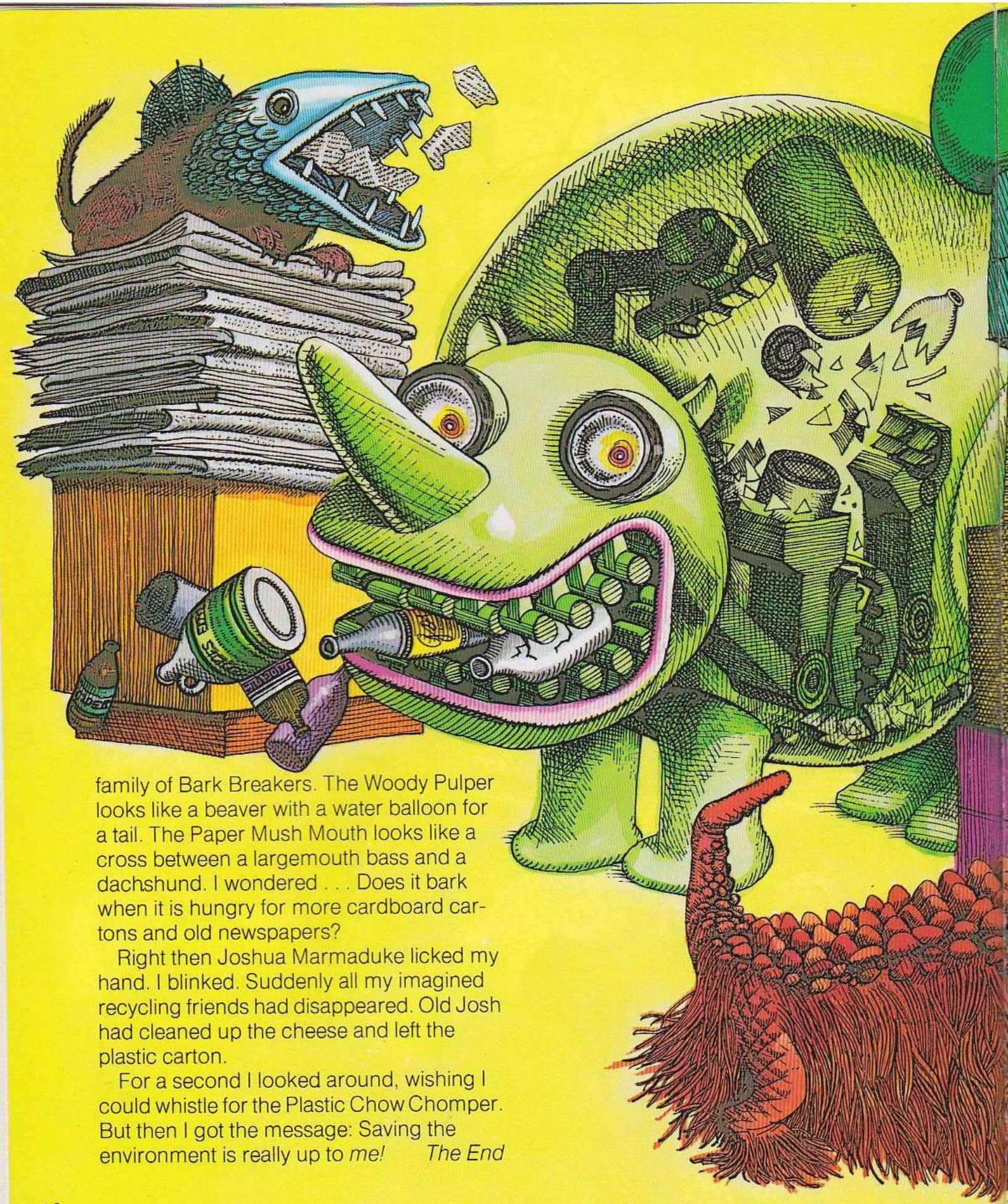
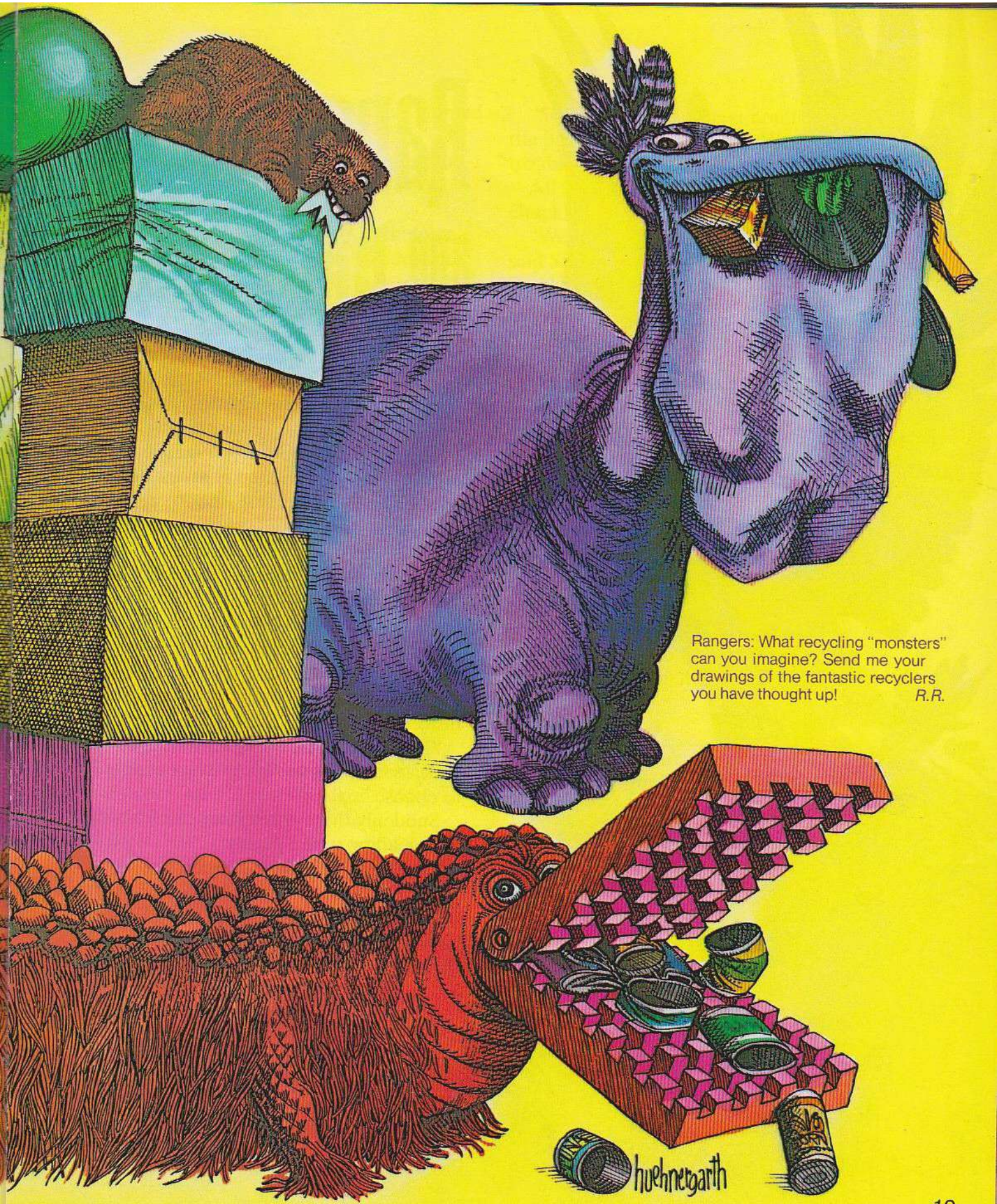
CHOMPER
huehnergarth



family of Bark Breakers. The Woody Pulper looks like a beaver with a water balloon for a tail. The Paper Mush Mouth looks like a cross between a largemouth bass and a dachshund. I wondered . . . Does it bark when it is hungry for more cardboard cartons and old newspapers?

Right then Joshua Marmaduke licked my hand. I blinked. Suddenly all my imagined recycling friends had disappeared. Old Josh had cleaned up the cheese and left the plastic carton.

For a second I looked around, wishing I could whistle for the Plastic Chow Chomper. But then I got the message: Saving the environment is really up to *me!* *The End*



Rangers: What recycling "monsters" can you imagine? Send me your drawings of the fantastic recyclers you have thought up! *R.R.*

Ranger Rick and his friends

Adventure #92
Last but not Least!

by Robert A. Brownridge

The air in Deep Green Wood was filled with the sound of excited chatter. All the animals had gathered together to celebrate the Fourth of July.

"This will be the best Fourth of July party in 200 years!" squealed Sammy Squirrel.

"Ranger Rick, Ollie Otter, Becky Hare and Bobby Beaver ought to be home any time now," said Margie Meadow Mouse. "They've traveled a long way looking for the animals that were most important in the history of the United States."

"I wonder which one Rick's Rangers will pick," said Sammy. "It's going to be hard to choose."

Suddenly there was a loud call from the path leading to the woods.

"We're home!" shouted Rick and his friends. Everyone ran to greet them.

"Welcome back!" called Davey Deer as Frances Flicker flew to Rick and landed on his hat.

"You're just in time for the picnic," chimed in Cubby Bear, patting his stomach.

"We've got a speaker's platform all set up for you, Rick," said Frances. "We want to hear all about your trip."

Soon all the animals gathered in the picnic area and began to feast. Zelda Possum and the others had already prepared several plates of delicious sandwiches, cookies and cakes. Cubby, as always, was the first in line.

"Cubby, since you're first in line, why don't you serve?" said Zelda.

Rick stood on the platform so he could be seen by everyone.

"I guess you all know which animals we visited these past months," began Rick. "It was a great trip. We had some exciting adventures and met some wonderful friends."

"Hurray for the beavers!" interrupted Bobby. "They get my vote."

"Now Bobby," laughed Rick, "we know beavers were important to our early history, but so were bison, mustangs and whales."

"Don't forget the white tailed deer," shouted Davey.

"Don't worry, Davey," said Rick. "We aren't forgetting anyone."

"But I thought you were going to visit six animals," said Frances Flicker. "You've only told us about five."

"That's right, Frances," answered Rick. "But we had a little trouble finding our last candidate . . . ."

"That's no problem, Rick," interrupted Cubby. "I'll gladly be the sixth candidate. I'll make my acceptance speech right now."

"Sorry, Cubby, our next nominee is to be the bald eagle," said Rick. "We just had trouble finding one, that's all."

All Ranger Rick's friends started to chuckle.

"We've got a real surprise for you, Rick," said Sammy, scrambling along the limb over Rick's head, "I guess you haven't heard our new arrivals. Everyone keep quiet, please."

When the animals settled down they could hear the cries of young birds from very high up in the trees. Looking up, Ranger Rick saw a very large nest. A majestic bald eagle was sitting on it and another was soaring above.

"It's Merry Eagle and her mate, Edgar!" shouted Rick with delight. "Come on down, Merry. We have something important to talk about with you."

With a graceful swoop of her broad wings, Merry flew down and landed beside her old friend.

"What's this I've been hearing about Bicentennial Animals, Rick?" she asked.

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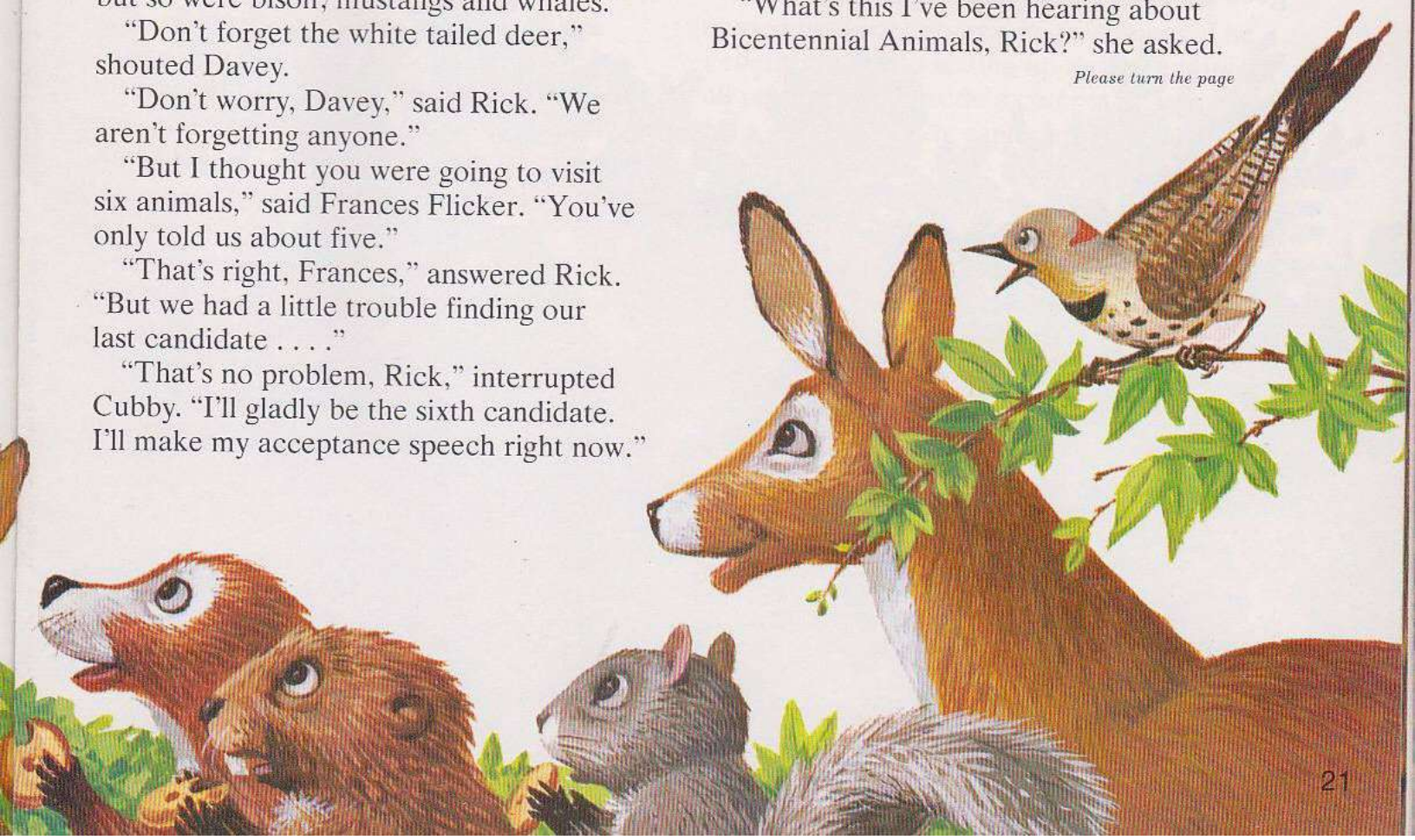


After Rick explained, Merry said, "One thing I do know about us eagles: We have been the official symbol of the United States for nearly 200 years, and all bald eagles are very proud of that. But our story goes back much further, Rick. Long before white settlers came, several American Indian tribes considered us to be sacred. It must be our power and good looks that make us such a favorite." She sounded very proud.

"The fact that you live nowhere else in the world but North America is really something," said Sammy.

A ray of light from the setting sun filtered through the trees and shone on Merry's white head. She held herself proudly, and her keen eyes gleamed.

"But like some other animals we met on our travels, you have some real problems today, don't you, Merry?" said Rick.

"That's right, Rick. We're swift fliers and good hunters, but so much of our natural habitat has been destroyed in the United States that our numbers are growing smaller all the time. Pesticides haven't helped us either. Many of the fish we eat are polluted with them. That can kill us directly or make our egg shells too thin. So they often break when we lay them or sit on them, even if we're very careful. This year Edgar and I were lucky. He's up there guarding our *two* eaglets!"

Everyone looked up trying to see the babies. But the big nest of sticks hid them, and daylight was fading fast.

Suddenly Merry's head swiveled around. She sensed danger almost before she saw it! Gliding silently through the treetops was a great horned owl . . . heading straight for the eagles' nest! Merry took off! No owl was going to snatch her babies! Edgar had

Drawings by Lorin Thompson

seen the owl too. As soon as Merry reached the babies Edgar flew from the nest and started to dive-bomb the owl. Feathers flew and cries filled the air as Edgar screamed at the owl.

Merry moved from side to side in the nest, covering the babies with her wings. Then, with one strong move, she jostled the nest so hard one of the babies tumbled over the side. Quick as a flash the usually slow-moving Cubby dashed over to the tree. He caught the eaglet before it hit the ground.

"You're a hero!" shouted Sammy. "That was a great catch."

At last Edgar drove the owl away and returned to the nest. Merry flew down to check on her baby. "That owl won't bother us again," she said. "It lost more than a few feathers, by gosh! Thanks, Cubby. You certainly were right there when needed!"

Everyone settled down again.

"I see you and Edgar can handle your owl problems O.K." said Rick, smiling. "But you'll need help finding safe places to live and unpolluted fish to eat. It's a good thing you've got friends like the National Wildlife Federation. They have just purchased land for two new eagle refuges. The Federation is also setting up an eagle library, all programmed inside a computer. It will help scientists study eagles and learn better ways to protect you."

"That's really good news, Rick," exclaimed Merry. "It would be wonderful if someday we could be taken off the endangered species list. But now I'd better get back to my nest. Don't forget to let me know who finally wins the award."

"Don't worry. As soon as I hear from my Rangers, I'll tell *everyone*!" *The End*

Rangers: Now you have met six of the animals who were important in the history of our country. Write and tell me which one (and only one) is your favorite and send the letter to me marked Bicentennial Animal, National Wildlife Federation, 1412 16th Street NW, Washington, DC 20036. Be sure to let me have your votes by July 31. Let's hear from all of you! *R.R.*

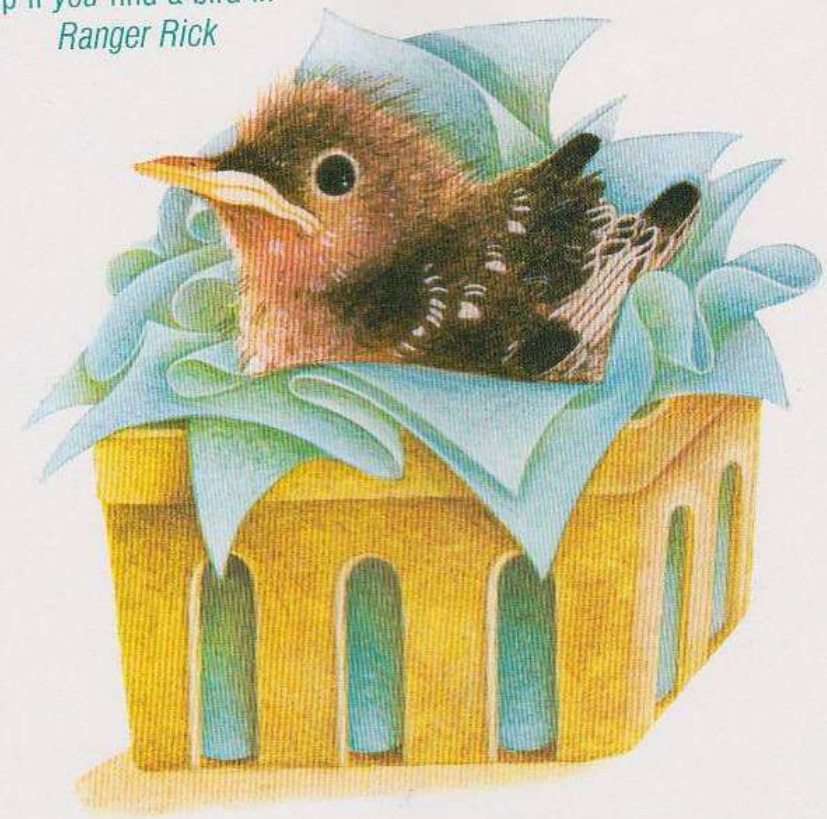
Photo on next page by David Hancock

Birds in Trouble

Birds, birds—always birds in trouble! Each year Ollie Otter and Bobby Beaver and Zelda Possum and my Rangers everywhere find birds that need our help.

Let me tell you—helping birds isn't easy! *Nobody* is as good a parent to a baby bird as the parent birds themselves. Few babies survive on substitute food when cared for by foster parents such as you and me. So we always try to find the nest and the parents before adopting a young bird. Even injured grown-up birds need lots of special care.

But here are three stories and the names of two books which may help if *you* find a bird in trouble. *Ranger Rick*



What to Do

by Betty Barford

It can happen anytime. One minute you're minding your own business and the next—there it is! A bit of living, breathing fluff sitting helplessly on the ground. A baby bird.

If the nest is reachable you gently put it back in. If it hops out again, calm it down before putting it back by cupping it in your hands. If the baby is cold and shivering, you should hold it for a while to warm it. The rule is to get parent and its nestling back together again if at all possible.

If the nest is damaged or fallen, try to mend or replace it. Even "splint" or prop up a broken tree limb if necessary. If the youngster can cling to a branch, it can be placed in a bush or tree, high enough to be safe from harm. The parent will feed it there or perhaps coax it back to the nest when things calm down. Remember—your scent on the baby will *not* keep the parents away.

But suppose that this time you are sure the parents are gone and are not coming back. *Your* bird is really an orphan, and you have decided to adopt it. First, take it home and put it in a "nest"—a small box or coffee can lined with paper towels and a stack of 15 or 20 facial tissues. These can be

removed one at a time when they get dirty.

Don't let the little bird get cold; keep the nest away from drafts. If your bird is still naked, hang a 60–100 watt bulb close enough to the nest to keep a temperature of 35°C (95°F). As the bird grows feathers, lower the temperature 3°C (5°F) each week by raising the bulb. Be sure your bird can't touch the hot bulb.

A bird cage will make it easier to raise the baby as it gets older and more active. The bird shouldn't be handled any more than is necessary—it won't like to be petted or cuddled.

A very young bird doesn't need water; food is enough. Try pea-size pieces of canned dog food, dipped into a formula made of one egg yolk mixed with enough milk to make six fluid ounces. Be careful not to use dog food that looks oily or greasy.

If you are lucky, your bird will open its mouth when you come, and you just pop in the food with your fingers. Place the food well back in the throat with your little finger. Feed the bird until it refuses to open up—then it's full!

If your bird won't open up when you come to feed it, don't worry. Just hold it in one hand, pressing gently at the base of the bill with your thumb and forefinger. Pry gently, and when the beak is open enough put in a bit of food.

Drawings by Linda Gist

Most young birds get the message as soon as they taste the food.

A very young bird must be fed every half hour during daylight hours. That can get to be quite a chore—a good reason why you should always try to return the bird to its parents. Luckily a bird grows up fast. You can watch it get more sensible and aware day by day. And it's fun to watch its baby fuzz turn to feathers.

As your bird gets older and starts hopping around, you can feed it a variety of food. Try small pieces of hard-boiled egg yolk, raw lean beef and pieces of fruit and vegetable. You'll soon learn its favorites.

Eventually the day comes when it is time to release your bird. It flies from your hand to a nearby bush and turns at your call one last time. For a moment it's gone yet still a bit yours. Then off it flies—wild and free.

Please turn the page

Photos by Ruth Ann Hanley

Teresa's Starling

by Ruth Ann Hanley

Teresa, pictured here with a starling, found that feeding a baby bird can be tricky sometimes. When she went outdoors to feed her bird in its box, she had a hard time pushing food into its throat far enough so it would swallow.

Then Teresa had an idea. She had read that a bird swallows when food touches a "trigger" deep in its throat. She got a clean eyedropper. One drop of water placed sideways on the bird's closed beak made it open its

mouth wide. Another drop placed in its mouth rolled down its throat. Quickly Teresa placed a food ball in her little starling's mouth. As the water drop hit the "trigger" reflex in its throat the starling swallowed both water and food. Then she fed it a worm the same way, and soon Teresa and her wild pet were cooperating.

Next day the starling opened its mouth when it saw Teresa. And the day after, it picked morsels off a plate.

Teresa kept a screen on top of the wooden box and brought the box in at night.

She took the starling into the yard each day and from a perch on her hand let the bird take off.

Soon it could fly waist high across the yard and eat and drink for itself.

Then Teresa let it go.

The Summer of the Hummer

by Debbie Fuller

I will always remember the year when I was eight years old as "The Summer of the Hummer."

My grandmother found an adult ruby-throated hummingbird fluttering on the ground beneath her picture window.

We took him in and my grandpa looked him over very carefully. We could find nothing wrong except that the little bird couldn't fly. We put him in a canary cage, afraid that he might recover and hurt himself by flying into a window again.

We put some small branches in the cage for him to perch on. Next, we stirred together one part sugar and nine parts water, boiled it, and let it cool. Then we added red food coloring and put some in an eyedropper. When we offered the hummer some, he knew just what to do! He drank and drank.

At first we fed him in the cage, then we found that when we pressed a small twig against his breast, he would climb onto it and we could take him out to feed him. He was never afraid of us, and it seemed as if he was always asking for food when we came near the cage.

After a few days, when he didn't get any better, Gramps said, "Perhaps he isn't getting enough of

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the right food. Why not bring in some wildflowers for Hummer?"

We found columbine and larkspur, and Hummer got very excited when he saw them. He stretched his neck, and his wings hummed, but he didn't fly. So we put him on his little perch and held the flowers so that he could feed on them one by one. Hummer loved that, poking his long bill deeply into each one. He was gathering nectar and perhaps tiny insects with his long, tube-like tongue.

To save the wildflowers we took Hummer outdoors to them. He rode on his little stick, free to fly away if he wanted to. He enjoyed that, his head turning this way and that, and I think his bright eyes could see a flower before we could. Because hummingbirds

Photos by R. Paul Bowman

Photo by Ron Austing

visit hundreds of flowers each day, Hummer kept us busy. But it was lots of fun.

The very next day it happened: As we were making our rounds to the flowers he flew away! We like to think he saw his mate. Although we miss him very much, we are so glad that he is well again and back where he belongs. *The End*

Rangers: If you decide to become a foster parent, there's more information from a real veterinarian in *Wild Orphan Babies,* by William J. Weber, D.V.M. (Holt, Rinehart and Winston, 1975), available from Hollow Oak Book Nook, page 40. Also check *Care of the Wild Feathered and Furred,* by Mae Hickman and Maxine Guy (Unity Press, 1973). *R.R.*

insect games

This bright stink bug has the face of another animal hiding on it. Can you find it? See answer on page 36.

by Laura Lynn Hitchcock

When my father walks out to our flower garden, he doesn't look at the flowers. He looks at the insects. He makes studies of them and is called an entomologist (en-teh-MAHL-eh-jist). He *likes* insects.

Dad doesn't spray the garden because he doesn't want to harm the insects. Mother says, "We don't have a flower garden; we have a bug garden." We even play insect games.

Hamburger Races

We find a spot where ants are busy running over the ground. Each of us puts down a speck of hamburger. It doesn't take much meat, just enough to fit under a fingernail. The ants find the meat and pull it to their nests. Sometimes several ants pull in different directions and have a tug-of-war. The winner is the person whose meat is first pulled a distance of 12 centimeters (about five inches).

Bee or Fly?

Some of the yellow and black insects flying around our garden are not bees, but syrphid (SIR-fid) flies. These flies look like bees, but they do not sting. They mimic the colors, size and movements of bees.

If you look carefully, you can tell a look-alike fly from a real bee. The eyes of a fly are bigger and cover more of its head than those of a bee. A fly has only one pair of wings; a bee always has two. A syrphid fly hovers

and darts about the flowers more than a bee. If you practice watching, you will learn the difference quickly.

We sit in the garden and watch for flower visitors. One of us counts bees and the other counts syrphid flies. The one who first reaches ten is the winner. If it is a cold or cloudy day, there may not be enough insects to count. Instead we count the number of flowers a single bee or fly will visit.

Yes-No?

In the quiet parts of streams, there are water striders. Water striders are predacious (pre-DAY-shus); that is, they prey on animals. Whenever a fly falls into the water, the water striders rush to eat it. When we drop a spruce needle on the water, the water striders may be fooled and come to investigate. If they don't come over at once, they won't come over at all, no matter how long you wait. This may be because the spruce needle doesn't move like a real insect. We call this game *"yes-no?"* We drop the spruce needle. Will a water strider come over, yes or no?

We're always trying to think up new insect games to play in our bug garden. They're different and fun. Can you think of any other "buggy" games? *The End*

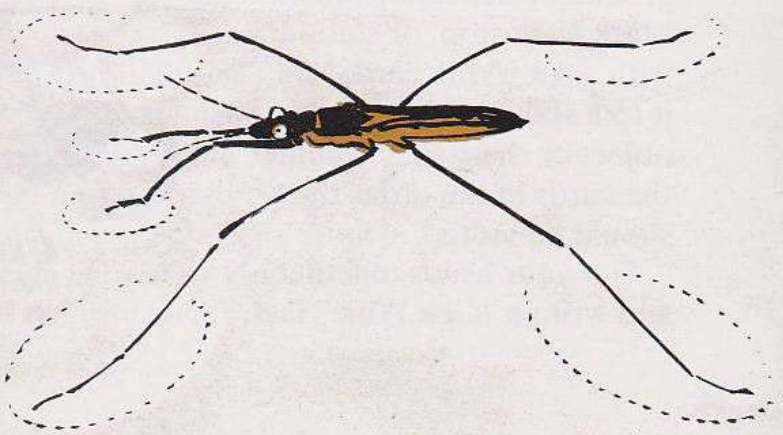


Photo by Robert Carr. Drawings by Arabella Wheatley

Nature Club News

Want to have some fun and help nature too? Well, here's a great idea from Russel Bachert, Jr., Director of the National Wildlife Federation Wildlife Camp: You and your club can make your own nature trail!

You can make one almost anywhere—in a woods, meadow, backyard, school ground, vacant lot or city park. Start by asking the owner of the land for permission to use it. Then scout around for interesting natural sights, sounds and smells. Ask a biology teacher, nature center guide or another nature expert to look over the area with you. Next run a string from one interesting stop to another to guide your trail visitors. Be careful not to run your trail over steep and rough ground or delicate plants. Mark each stop, or station, with a 4 x 6″ file card. Nail it to a stake or tie it to the object or the string. Number the cards in the order they should be visited.

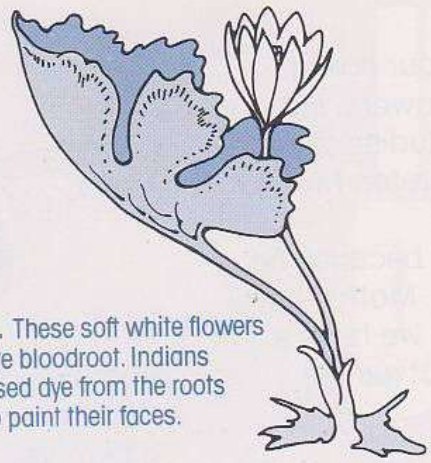
Get your heads together and write a "Gee Whiz" fact or interesting question on each of the cards. (Back issues of *Ranger Rick* and the Golden Press nature guides will help.) Your cards may read like the ones shown on this page. Or they may ask your trail visitors to use their senses—to pinch and sniff a spicy leaf or listen to beetles chewing beneath the bark of a tree.

Waterproof your cards by dipping them in varnish or melted paraffin (ask your club leader to help you!) or by sandwiching them between two pieces of clear Contac paper.

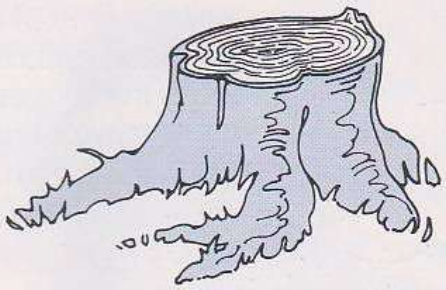
You may want to choose a main idea, or theme, for your trail, such as "Wild Foods You Can Eat," "Animal Homes" or "Sounds of the Night."

When you're ready, invite your friends, classmates, neighbors and family to visit your trail. You and your clubmates can take turns guiding the trail visitors. Or each of you can stand at a station and answer questions. Have fun being your neighborhood's naturalists!

The End



1. These soft white flowers are bloodroot. Indians used dye from the roots to paint their faces.



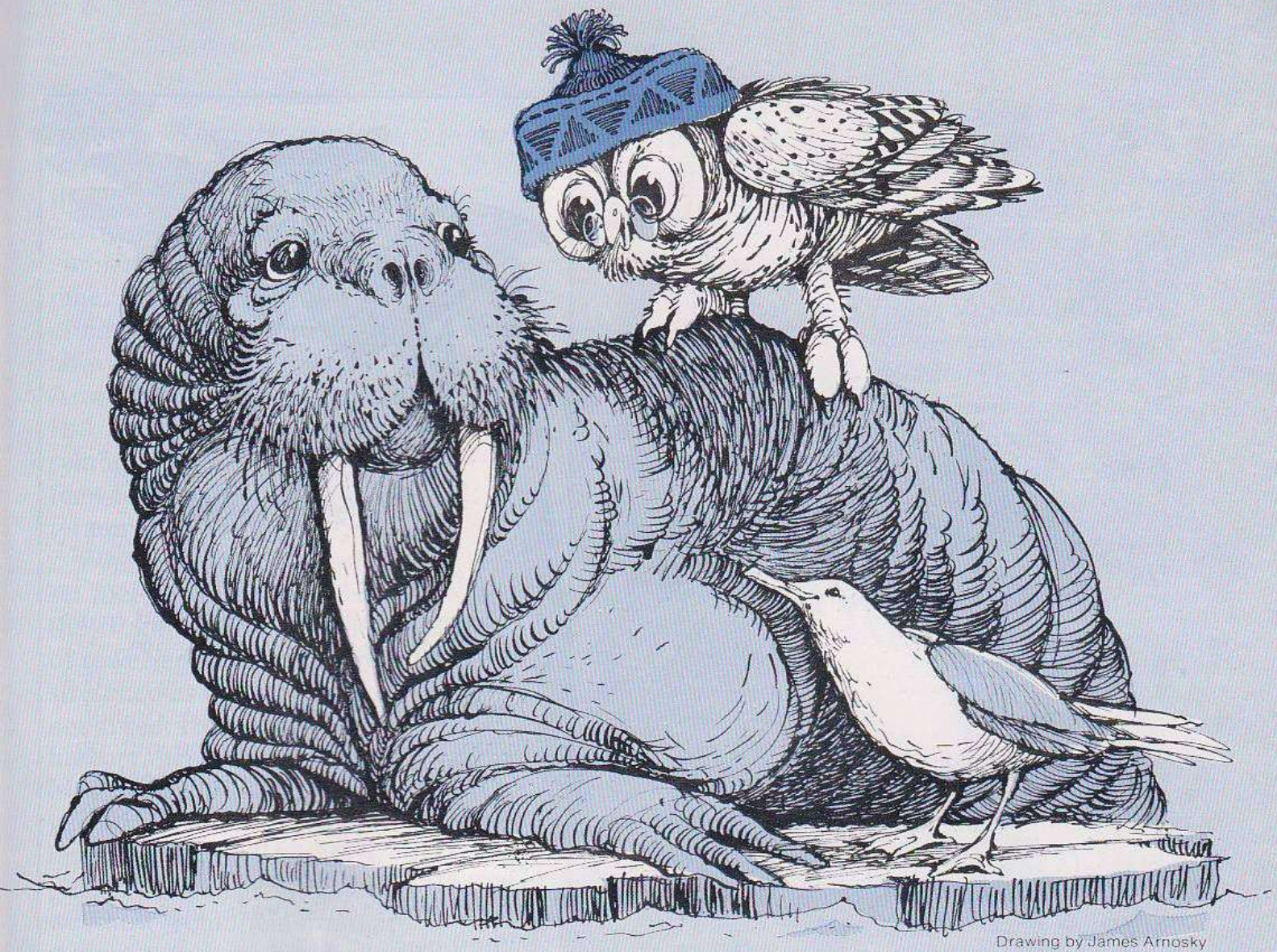
2. Count the growth rings. If this tree was cut in 1970, in what year did it sprout?

3. Look UP to see a hornets' nest. Do not disturb before winter!

4. A little striped rodent lives nearby. Can you see the entrance to its home?

Drawings by Phil Nicholson

Rangers: For more tips on what to look for on your nature trail and how to write your trail markers, send for free Nature Trail Tips, Ranger Rick's Nature Magazine, National Wildlife Federation, 1412 16th St. NW, Washington DC 20036 *R.R.*



Drawing by James Arnosky

by Wise Old Owl

WHO-O-O KNOWS?

Dear Wise Old Owl:

I sneaked a peek at the photograph on pages 30 and 31 of the March issue. How come those walruses are pink? Zelda Possum
Deep Green Wood

I was curious about that too, Zelda. So I flew off to the nearest ice floe to find a walrus.

I landed on top of the smartest-looking walrus I could see. She was a beauty—big and blubbery, with stiff whiskers. She looked very smart . . . for a walrus. Amazingly, her name was Wise Old Walrus.

I squished down beside her so I'd feel snug during our chat. Here's what we said:

Me: How come your body is pink?

Wise Old Walrus: Sunburn.

Me: Oh.

Wise Old Walrus: Don't worry. Your white owly skin won't get sunburned because you're protected by layers of feathers. We walruses don't have feathers or fur. We don't even have much hair on our skin. Want to feel me?

Me: H'm-m-m-m. Feels tough and wrinkly, but not very hairy. You're definitely not soft

Please turn the page

and furry like Ranger Rick and Becky Hare.

Wise Old Walrus: We get even less hairy as we get older. The hairs just drop out. In fact, some old males are almost hairless.

Me: Anyway, back to the sunburn. Does it hurt?

Wise Old Walrus: Nope. That's because it isn't *really* sunburn—at least not like humans get. My thick skin protects me from burning. But right underneath my skin are lots and lots of blood vessels. When I sit and snooze in the hot sun, these blood vessels swell up. As I get hotter and hotter, my body looks pinker and pinker. It just *looks* like sunburn. It means that I'm feeling warm and snuggly as I snooze in the sun.

Me: Feeling in the pink, eh?

Wise Old Walrus: Very funny . . . for an owl.

Dear Wise Old Owl:

Who are you really?

J. Goodell, Age 11
Keene, N. H.

I've been waiting a long time for someone to ask me that question because I love to brag!

I'm friendly and curious, with a good sense of humor. I'm very smart because I ask a lot of questions. I look especially smart when I ruffle my soft brown feathers and blink my yellow eyes very slowly.

But here's my big secret—*Wise Old Owl* is a female!

When I first met Ranger Rick, he used to call me Miss Wise Old Owl. Then he changed to Ms. Wise Old Owl, but he kept forgetting how to pronounce "Ms." So I told him, "Rick, stop being so formal. Just call me Wise Old Owl. And we'll keep it a secret until someone asks me . . . then won't he be surprised!"

Now you know my secret. Are *you* surprised?

Answer to Insect Puzzle, page 32: Can you see the face of a bat or fox? Both are right. Are there any other creatures you can see? They are right too.

Dear Wise Old Owl:

The egg I ate for breakfast had two yolks. What kind of egg was it?

Freddie Jacobs, Tucson, AZ

It was a hen's egg, but it was one of nature's oddities. About one out of every 530 hen's eggs is a double-yolker. Can you imagine breaking open a triple-yolker? They're *very* rare.

Here are some more egg facts:

- An emu's dark green egg looks almost black.
- The ostrich lays the world's largest egg. It's about the size of a large grapefruit and its shell could hold about 19 chicken eggs.
- A kiwi lays the biggest egg for its body size—¼ of the bird's weight. If an ostrich layed an egg this big, the egg would weigh over 50 lb.!
- The bee hummingbird's pea-sized egg is the world's smallest bird egg.
- The male king and emperor penguins keep their egg warm by holding it on their feet and covering it with a fold of flesh.

(P.S. You can find out more about eggs in the story on page 41.)

Drawing by James Arnosky

by Kate Dunsandal

LIBERTY TREE

When the war for Independence began, the first Revolutionary forces carried flags that bore the emblem of the eastern white pine! It flew from the masts of naval ships; it fluttered above the Revolutionary Army at the Battle of Bunker Hill. The white pine was a symbol of the colonists' fight for liberty from royal tyranny.

When the first colonists set foot on North America, they found mile upon mile of towering forests that stretched as far as the eye could see: oak, maple, hickory, hemlock and beech. Most majestic of all stood the gigantic white pines. Nobody knows how long these great pines had been growing, but we know from their size that it must have been hundreds of years. Some were 61 meters (200 feet) tall, as high as a 17-story building.

Because the white pines grew in close "stands," these tall trees didn't have branches on their lower trunks. The lower branches had fallen off

Please turn the page

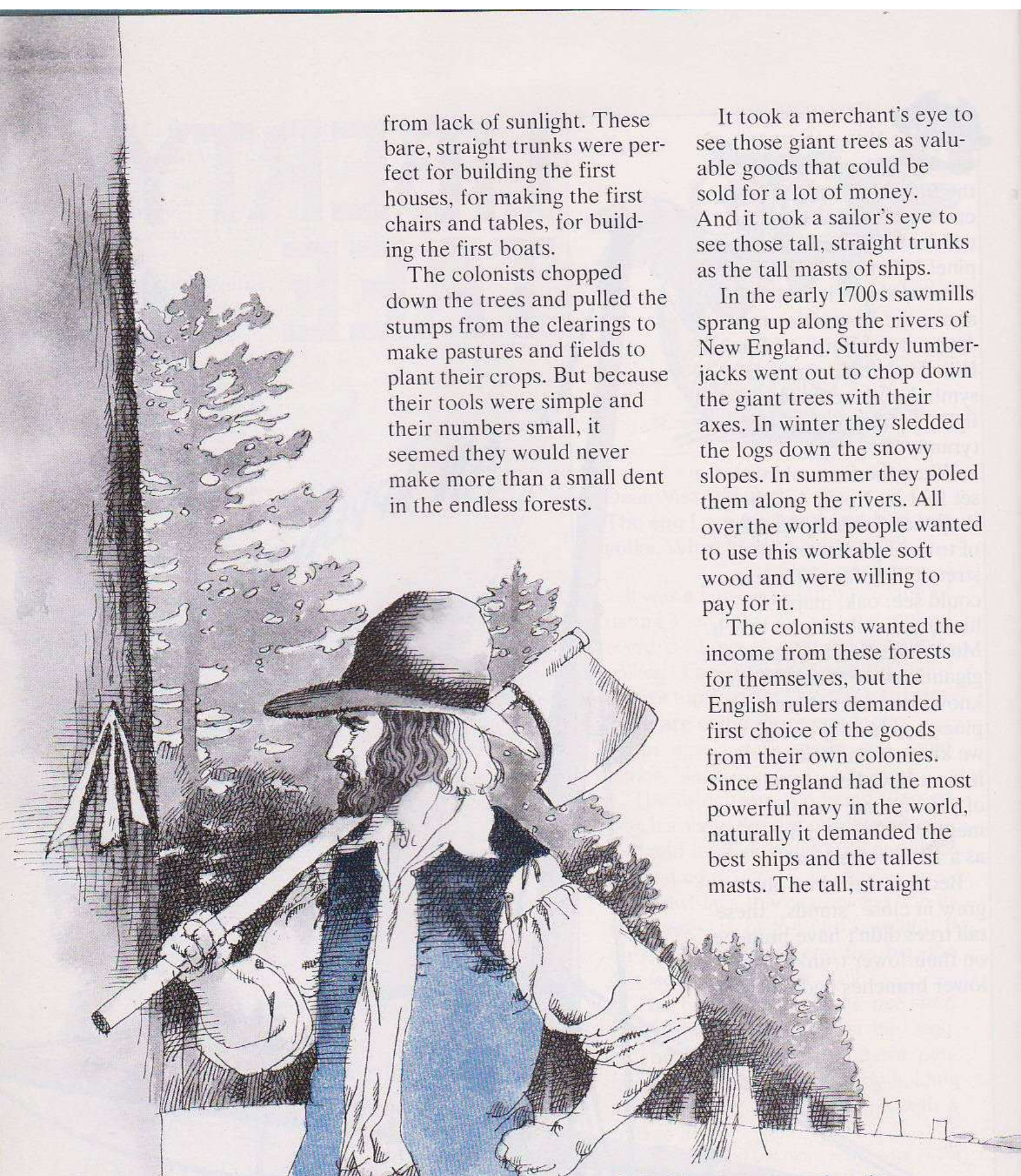
from lack of sunlight. These bare, straight trunks were perfect for building the first houses, for making the first chairs and tables, for building the first boats.

The colonists chopped down the trees and pulled the stumps from the clearings to make pastures and fields to plant their crops. But because their tools were simple and their numbers small, it seemed they would never make more than a small dent in the endless forests.

It took a merchant's eye to see those giant trees as valuable goods that could be sold for a lot of money. And it took a sailor's eye to see those tall, straight trunks as the tall masts of ships.

In the early 1700s sawmills sprang up along the rivers of New England. Sturdy lumberjacks went out to chop down the giant trees with their axes. In winter they sledded the logs down the snowy slopes. In summer they poled them along the rivers. All over the world people wanted to use this workable soft wood and were willing to pay for it.

The colonists wanted the income from these forests for themselves, but the English rulers demanded first choice of the goods from their own colonies. Since England had the most powerful navy in the world, naturally it demanded the best ships and the tallest masts. The tall, straight



Colonists were angry when the best white pines were claimed by England with a broad-arrow mark.

white pines from America made the finest masts. So the English rulers claimed the largest ones as their property. They sent people to mark the best ones with a broad arrow shaped like a fat triangle. This sign clearly said "Crown property: Hands off!"

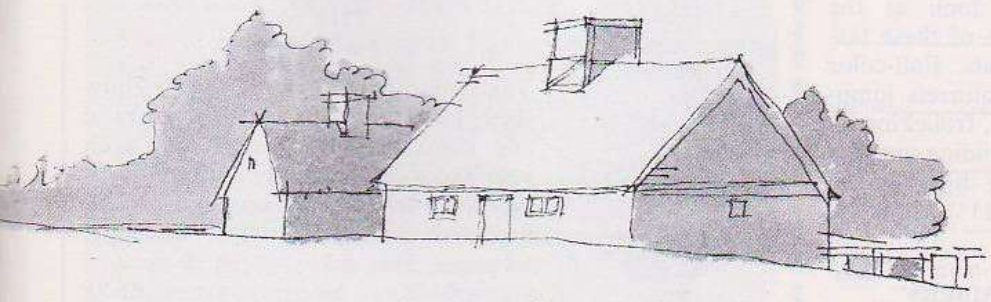
The colonists were angered when told that they couldn't use the pines for themselves. So they paid little attention to the broad arrow. It was easy enough to cut out the mark or burn it off a tree deep in the forest, and nobody would be the wiser.

The colonists didn't like many of the things they were made to do by rulers far across the sea. When they went to war against England, their first flag bore the white pine, which was called the liberty tree. In 1777, when Captain John Paul Jones sailed against the British on his ship *The Ranger,* it had three of the tallest white pine masts in the world.

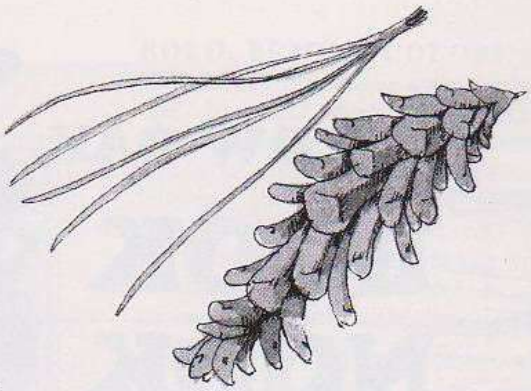
While the Americans were building their ships from their own forests, the British were having trouble getting wood for their navy. By the end of the Revolution many British ships were rotting in the docks—they had no wood for repairs or for new masts!

When the Revolution was over and independence won, the Americans began to move west. There they discovered great stands of white pines in Minnesota and Michigan. It took courage to go deep into the forest where the European pioneers had never been before. Some said that those lumberjacks grew almost as tall as the trees they cut. Nobody worried about killing the trees. As the lumbermen went farther and farther into the land, nothing was left behind but stumps and bare rocks.

Settlers moved in. Towns grew up. Houses and factories, bridges and boats, toys and tools, matches and masts were made from the mighty white pine. By 1900



Drawings by Richard Cuffari



Long cones and five needles per bundle identify a white pine.

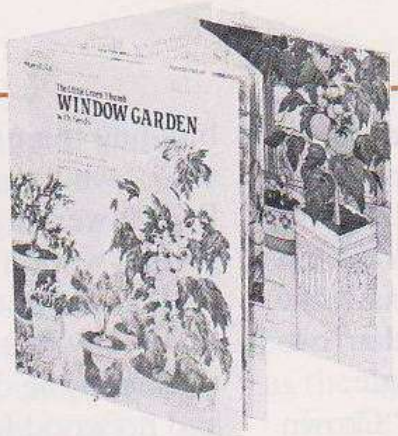
very few of the original giants remained. Some people had become rich and a new country thrived, but the white pine had been chopped down in the building.

The glory of the white pine was not yet over. As the west opened up, many farmers abandoned their rocky fields in the east and moved to the rich soils of the grasslands. Weeds sprang up in their abandoned fields. Then young white pines took over once again. Where the great forests had been, then farmers' fields, now there were new stands of white pines.

Even today these second-growth forests of white pine provide wood for houses, furniture and paper.

When these pine woods are left uncut, other trees will sprout under the white pines. Oak, maple, hickory, hemlock and beech will return. In time the forest may look again as the first colonists saw it—many great trees sharing the forest with the mighty eastern white pine. *The End*

HOLLOW OAK BOOK NOOK



THE LITTLE GREEN THUMB WINDOW GARDEN

by Doug Morse, Tom Cooke & Marc Brown.

This delightful, unique book features a six-foot panoramic foldout, game board, instructions for making things grow, and even a package of seeds to start your own garden! Great fun all year round for the entire family. 11½" x 9¼", ages 4-11.

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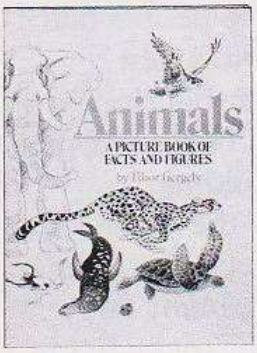

ANIMALS: A PICTURE BOOK OF FACTS AND FIGURES

by Tibor Gergely.

Did you know that an ocean sunfish is bigger than an ostrich? Or that a bee flies at 6 miles per hour and a swift at 100 miles per hour? Here, in vivid pictures are the answers to hundreds of questions about the world of nature. Maps showing where the animals live, and migratory routes of birds are included. 47 pages, 11¼" x 8¼", ages 4-8.

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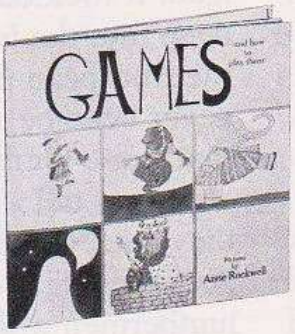

GAMES AND HOW TO PLAY THEM

by Anne Rockwell.

Elephants play *Giant Steps* and rabbits play *Hopscotch* in this bright, imaginative book of children's games. 43 games for all occasions — noisy games, quiet games, team games, games to play alone, and more! And all your favorite animals are illustrated in beautiful color. 48 pages, 10" x 10", ages 4-up.

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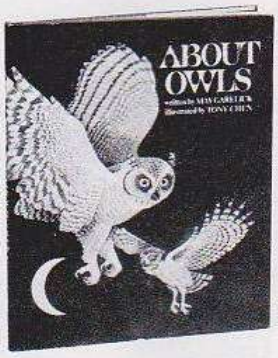
ABOUT OWLS

by May Garelick.



Do you know what owls eat? Or where they sleep? You will find the answers to these and many other questions about the fascinating world of owls in this lively book. And the beautiful illustrations help bring these unique birds to life. 40 pages, 10¼" x 8½", ages 5-8.

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WILD ORPHAN BABIES

by William J. Weber.

Here's a useful book, filled with illustrations and how-to advice, on caring for orphaned and injured animal babies until they are ready to return to the wild. 158 pages, 9¼" x 6¼", all ages.

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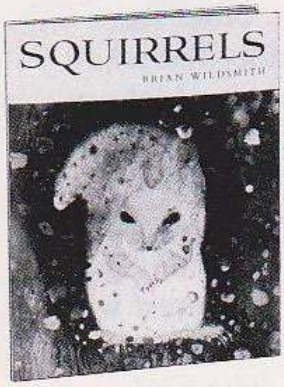
SQUIRRELS

by Brian Wildsmith.



A noted children's book author takes a delightful look at the character and habits of these fascinating little animals. Full-color illustrations show squirrels jumping from tree to tree, frolicking on trunks and boughs, hiding nuts for winter, and nesting high in the treetops. 32 pages, 11¼" x 8¾", all ages.

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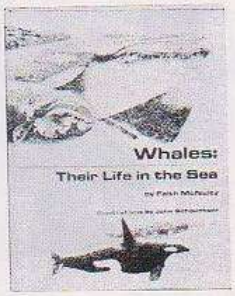

WHALES: THEIR LIFE IN THE SEA

by Faith McNulty.

The remarkable story of whales—how they "talk" across great distances, raise and care for their young, and each year make extraordinary journeys from the polar ice to the warm equator. Illustrated with true-to-life drawings. 88 pages, 9¼" x 7¼", ages 10-up.

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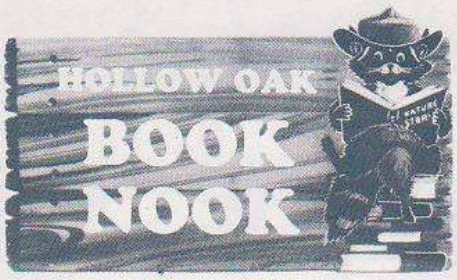

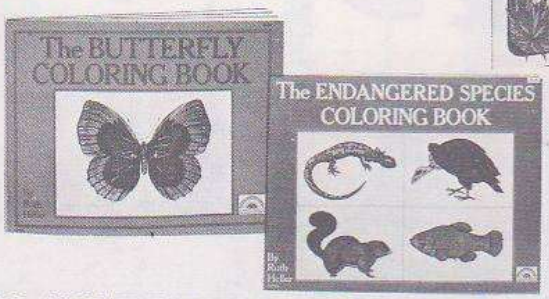

TWO GREAT-TO-COLOR BOOKS *by Ruth Heller.* You can copy nature's colors or create your own designs with these exciting coloring books. A wonderful way to make playtime educational—as well as enjoyable! Each book is 48 pages, 11″ x 8½″, all ages.

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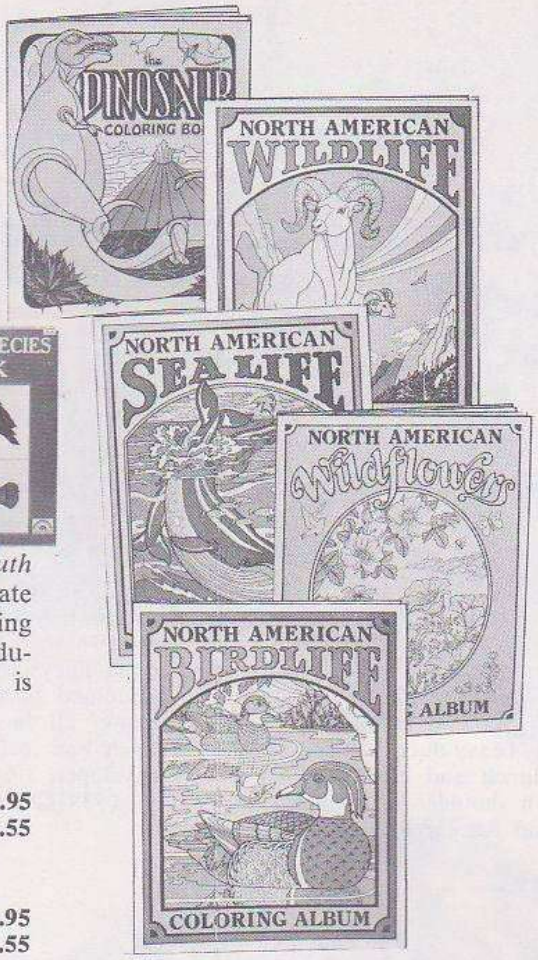

BOLD, BRIGHT COLORING BOOKS all brimming with marvelous drawings, lively descriptions, and astonishing facts! Imagine the fun you will have coloring—and learning about—prehistoric giants, exotic undersea creatures, and exciting wild animals. And when you are finished, you'll have great books to use and keep! Each album is 32 pages, 9¾″ x 8½″, all ages.

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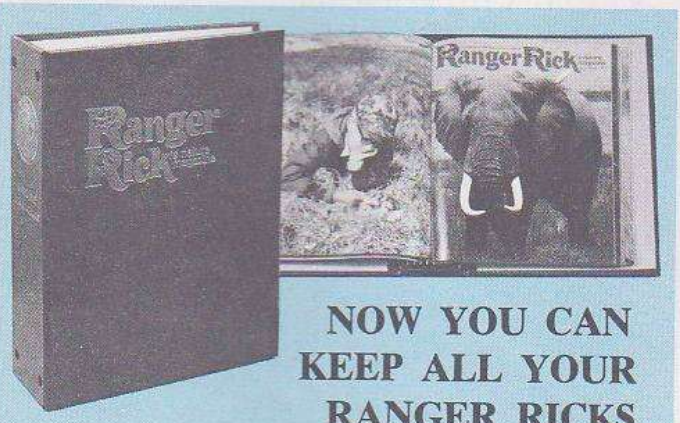

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HOLLOW OAK TRADING POST

GREAT CARRY-ALL. Summer's the very best time to get out and enjoy nature. And here's an easy way to carry everything you'll need on a hike, but still keep your hands free. This backpack's made with kids in mind — lightweight but sturdy (made of heavy-duty canvas), good-looking and roomy (holds lunch and binoculars, field guides and more). The brown shoulder straps are comfortable and easy to adjust, and Ranger Rick's full-color picture adds to the fun.

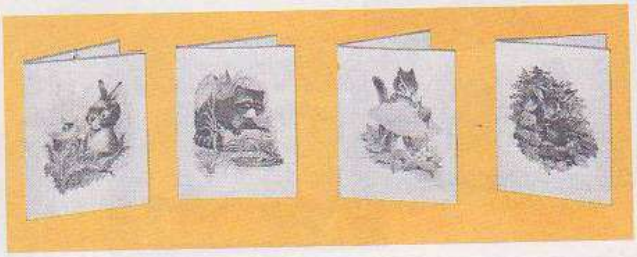
35189GG Ranger Rick Backpack $8.50

QUICK-NAMING GUIDE. One of the best things you can carry in your backpack is this easy-to-use bird identification guide. You can name the birds you see before they have a chance to fly away — just give a quick turn to the ID wheel! 48 beautiful American birds are pictured in full color, and short descriptions of each are included. And, if you can't get outside every now and then, it's lots of fun to use the wheel to make up bird naming games.

23450GG Songbird Identification Wheel $1.00

HERE'S A GREAT GAME. This is an old favorite that everyone knows how to play — but our version has a new twist that makes it even more fun! Each of the 41 cards shows a happy picture of birds and animals, wildflowers or fish. There's even an Old Maid Duck — and every single one is in colors as bright as summer.

20033GG Wildlife Old Maid $1.25

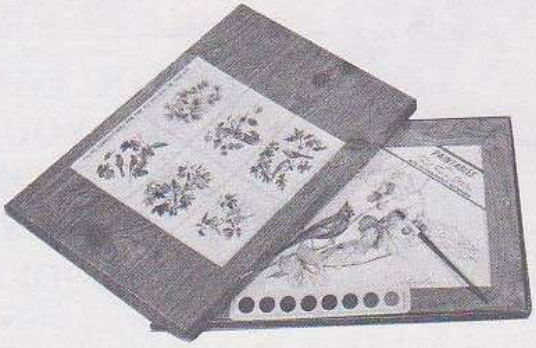


TO KEEP IN TOUCH. When you go on vacation, when you miss your friends from school, or when you just want to write a note to a pal, these little cards are just right. They show critters as happy as summer, each in his woodland home. Raccoon and Rabbit, Fawn and Chipmunk, all in full color on roomy French-fold notes. Each box includes 16 notes (4 each of 4 designs) and envelopes; 3½" x 4½".

09387GG Animal Whimsey Notes $1.00

WEAR IT WITH PRIDE. Here's something really neat to sew on your jeans, jackets or sweaters! It's your old friend Ranger Rick Raccoon in big, bold colors on the badge of his very own club. The colors won't wash out and the bright blue background won't fade — your patch stays as sharp as the day you put it on. And when you wear this emblem of Ranger Rick's Nature Club, you show that you care about wildlife and the environment.

39569GG Ranger Rick Patch $1.00



WHEN RAINY DAYS COME ALONG. Once in a while you can't get outdoors. But you can still have lots of fun — just get out your box of paintables and "brighten" up your day. This set of lifelike pictures is all ready to paint — 6 big pictures (Cardinals, Chickadees, Orioles, Woodpeckers, Grosbeaks, Blue Jays), each on 12" x 17" watercolor paper. Set includes 8 watercolor paints, paintbrush, coloring guide. And you can frame 'em and hang 'em when you're done.

35027GG Songbird Paintables (Set of 6) $3.00

The wonderful egg

by Kathleen N. Daly

Because of the egg, the wonderful egg with the shell, there are animals living on land today.

The egg! It means much more to us than something good to eat or to dye with pretty colors.

The egg in its shell is the key that unlocked the door to animals living on land.

Please turn the page

Long ago, there were no animals on land. All creatures lived in the water. They laid soft eggs (spawn) in the water, as most fish do today.

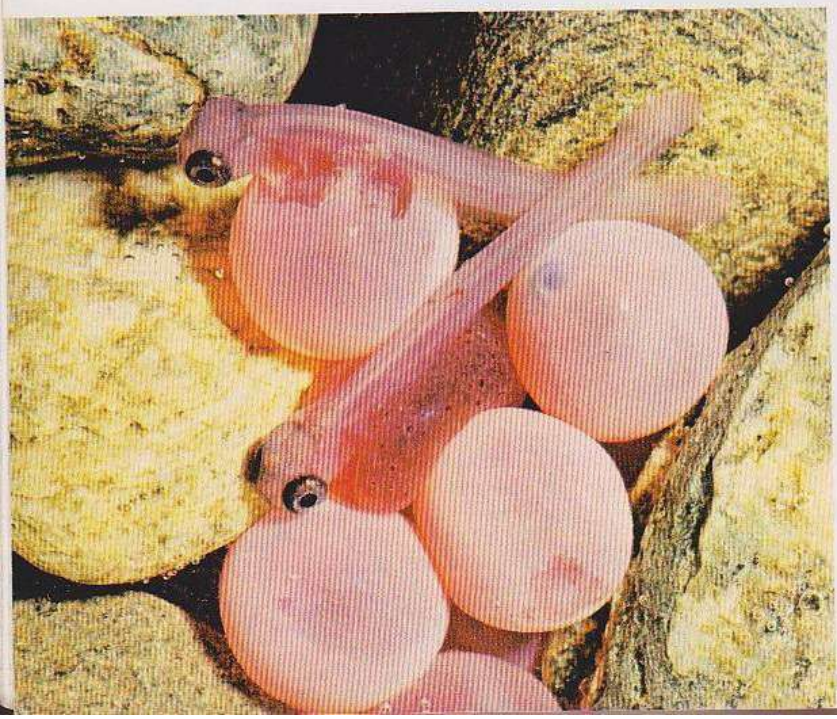
The female fish lets the eggs out of her body. Then a male fish swims over them and covers them with sperm from his body. The sperm fertilizes the eggs. A new baby fish starts to grow inside each egg.

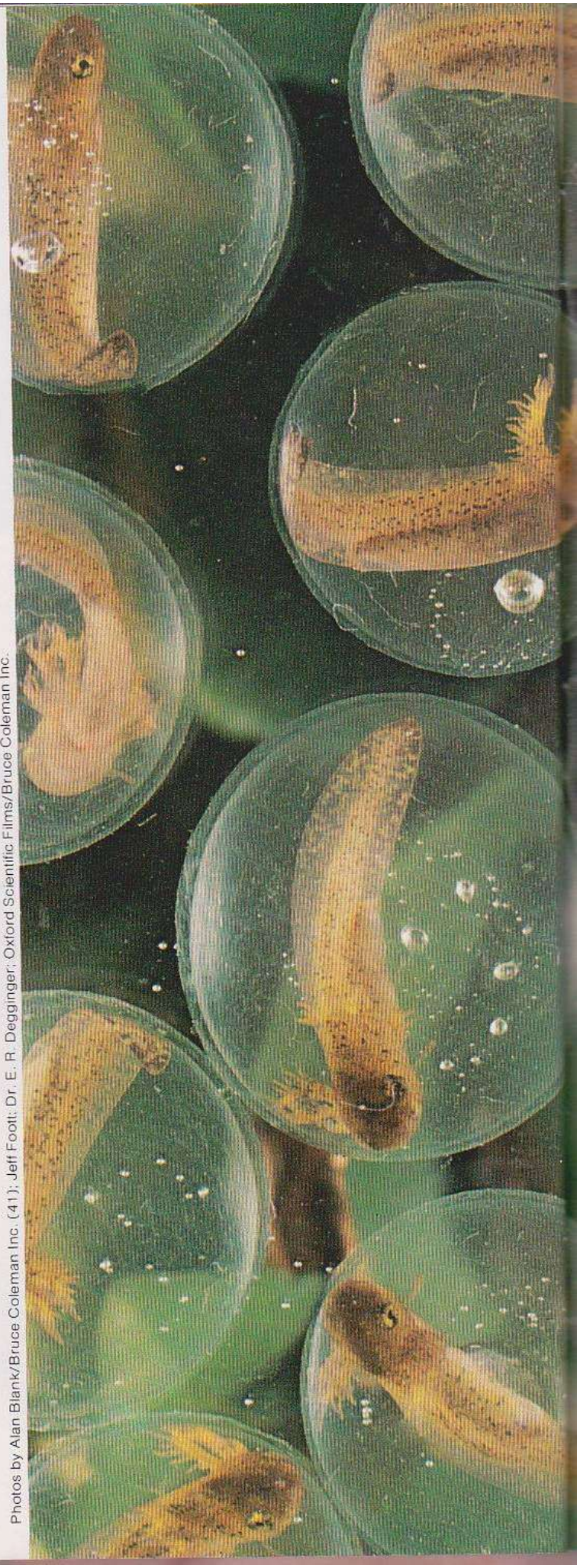
The eggs stay in the water. If they are lucky enough not to be eaten by hungry fish or other creatures, they will hatch when the young fish are old enough to swim about and take care of themselves.

When the first animals came ashore millions of years ago, they had to remain near streams and lakes so the females could release their soft eggs into the water. On land the eggs would dry up and die.

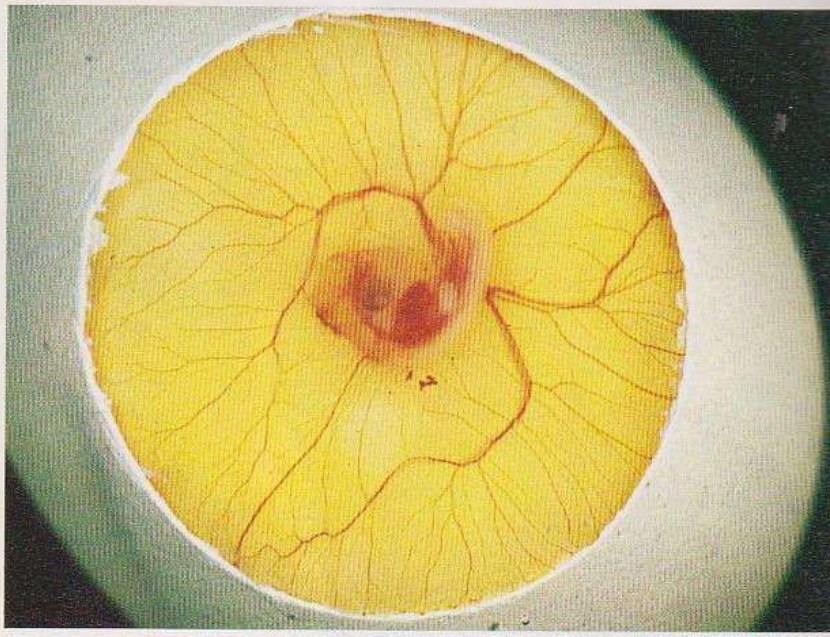
To this day most amphibians—frogs, toads and salamanders—lay their eggs in ponds and lakes where they spend their early lives. When they grow up they may live on land. But amphibians didn't quite make it to a full land-life. They still must return to water to lay their soft, jellylike eggs.

Fish ▼ and tadpoles ► hatch from soft eggs laid in water. On land they would die.





Photos by Alan Blank/Bruce Coleman Inc. (41); Jeff Foott; Dr. E. R. Degginger; Oxford Scientific Films/Bruce Coleman Inc.



A bird must also keep wet while it grows. But it's wrapped in a hard, protective shell.

Gradually, through millions of years, the wonderful egg with a tough shell came into being.

This egg, while still inside the female's body, must be fertilized by the male animal before the hard shell covers up the soft egg.

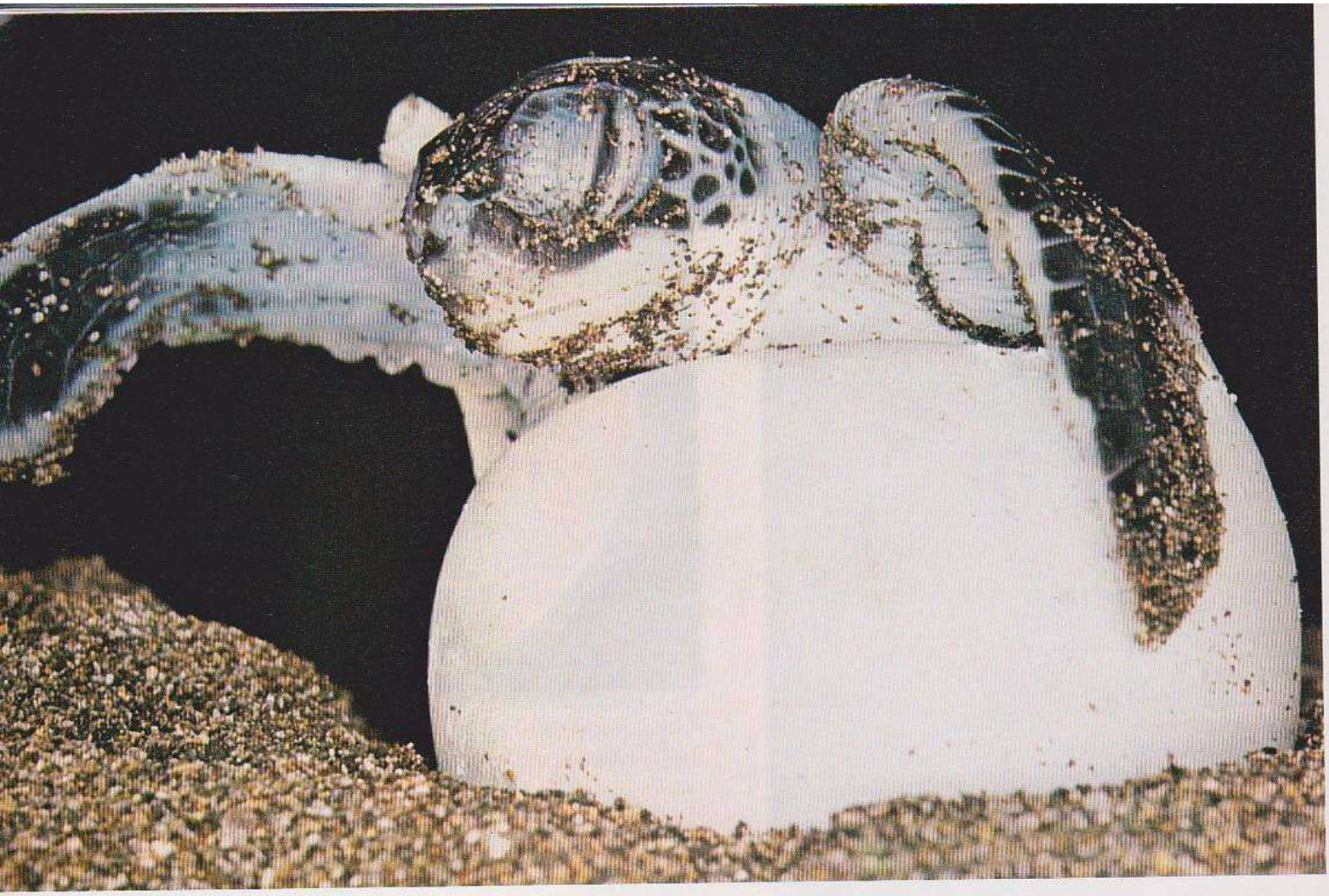
Inside the shell is the baby animal (embryo) and all the food (in the yolk) that it needs to grow.

A liquid-filled sac supports the weight of the embryo. Like the waters of a stream or the ocean, the liquid keeps the baby from drying out and cushions it against shock.

Because the shell is porous (has microscopic pores or openings), it can take in air for the baby to breathe and give off the waste gases. The embryo in this kind of egg would drown under water!

Thanks to this marvelous invention of nature, animals were able to travel far and wide on land, seeking out new places to live, sometimes far from water. They could lay their eggs in dry, sheltered places and leave them to hatch.

Please turn the page



Most reptiles—crocodiles, alligators, turtles and most lizards and snakes—lay eggs. These reptiles lay their eggs on land and generally leave their young to hatch out and take care of themselves. Reptile eggs have white, leathery shells.

A baby reptile has an egg tooth —a sharp point on the end of its snout—to help it break out of its tough shell. The tooth falls off once the baby has hatched.

Sea turtles lay about 400 eggs in a single year! The female waddles out of the sea and digs a hole in the sand with her flippers, often by the light of a full moon. Then she covers the eggs and goes back to sea.

When the baby turtles break out of their shells, they always go right into the ocean where they belong.

The eggs with shells that we know best are birds' eggs. Some birds lay their eggs in simple hollows in the ground or on rocky ledges. Others spend days and weeks making very fancy nests.

Bird eggs may be pure white, but often they are speckled and colored, which makes it harder for enemies to find them.

Birds incubate their eggs. That means that the mother or father bird sits on the eggs to keep them at just the right temperature for the embryo to grow.

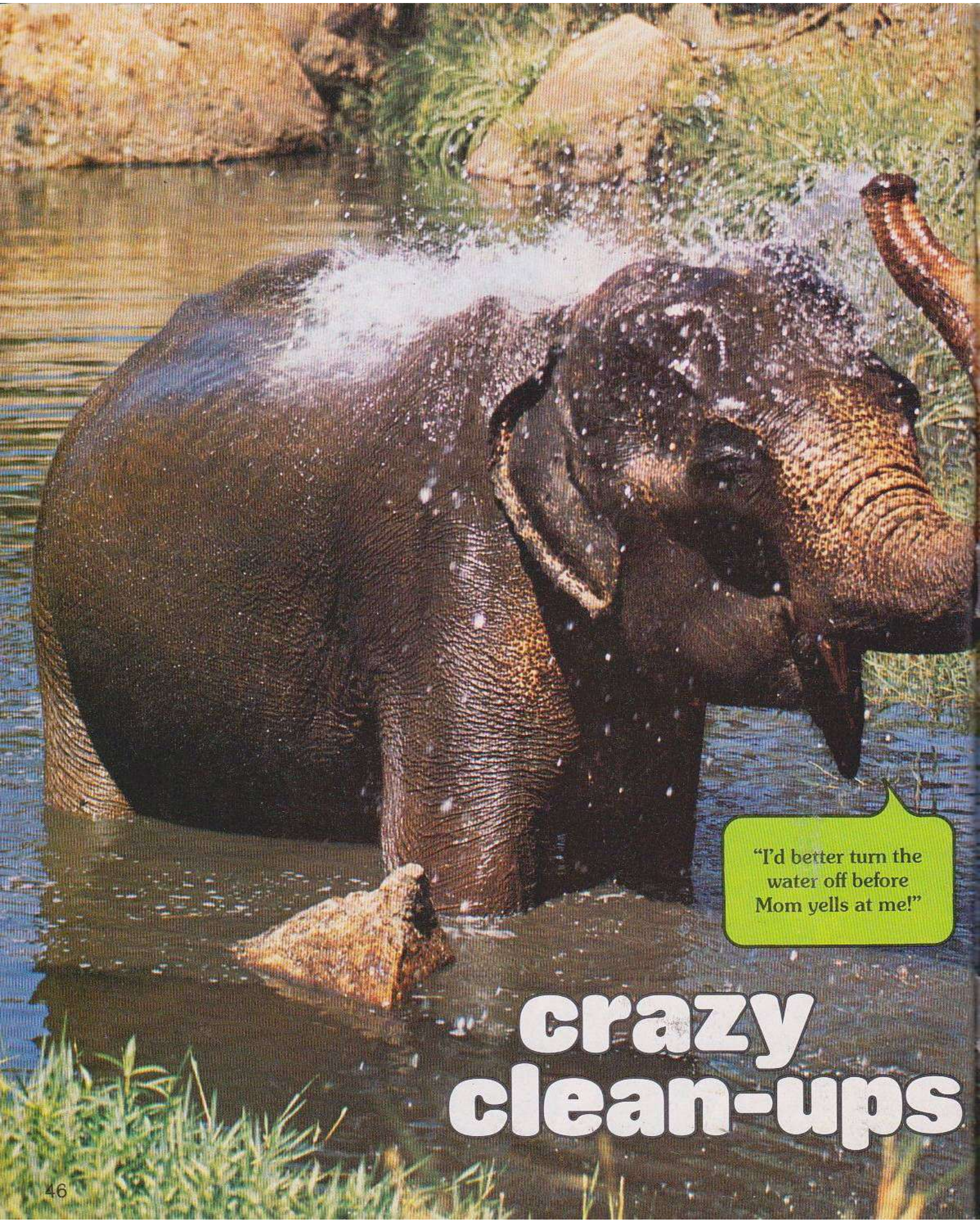
To "pip," or break through, the shell of the egg, the baby bird also has a sharp little egg tooth. But parent birds, unlike most reptiles, care for their eggs and young.

No matter what size or color or kind of creature is curled inside, if it weren't for the egg with the shell, there would be no snakes or turtles or lizards and no birds.

Hurray for the wonderful egg! *The End*

The egg with a shell.
It's more than something
to eat for breakfast or to
decorate for a holiday.
It makes living on land
possible for turtles,
snakes and all kinds
of birds. Hurray for
the wonderful egg!

Photos by David Hughes/Bruce Coleman Inc.; John Tveten; Heather Angel



crazy clean-ups

"So what if I splash a little water? I always clean up afterwards."
Photos by Erwin A. Bauer, Marilyn Krog, John H. Hoffman
"Who needs a washcloth? I have a nice wet tongue."